STATESMAN

OWNER MANUAL

Important operating safety and maintenance instructions.

A WORD TO STATESMAN OWNERS

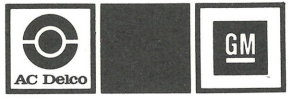
This manual has been prepared to acquaint you with the operation and maintenance of your vehicle and to provide important safety information. We urge you to read this publication carefully and follow its recommendations to help assure enjoyable and trouble-free operation of your vehicle. When it comes to servicing remember that a GMH Dealer has the trained personnel, the specialized equipment and the interest to assist you with your service needs.

Return to a GMH Dealer for Guardian Maintenance Service and any other assistance you may require.

To assist Dealers in handling your needs, General Motors-Holden's maintains Zone Offices in each mainland State capital. Should you have a problem that cannot be handled through normal channels, follow the procedure presented in this manual under the heading, Owner Relations.

We would like to take this opportunity to thank you for choosing a General Motors-Holden's product — and assure you of our continuing interest in your vehicle's operation and your satisfaction.

GENERAL MOTORS-HOLDEN'S



General Motors parts are identified by one of these trademarks.

Printed in Australia by The Dominion Press

Statesman OWNER MANUAL

This Manual should be considered a permanent part of the vehicle and should remain with the vehicle at the time of resale.

General Motors-Holden's sell their products in many countries. However, in the event that it is intended to take the vehicle outside the area or country where it was purchased, it is advisable to check with a Zone Office of General Motors-Holden's to ascertain whether maintenance service and spare parts will be available in the areas where it is contemplated travelling.

As the policy of General Motors-Holden's is one of continual product improvement, all specifications and equipment are subject to change without notice.

Issued by: GENERAL MOTORS-HOLDEN'S SALES PTY. LIMITED.

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RUNNING IN

YOUR VEHICLE'S INITIAL PERIOD OF OPERATING

You can operate your new vehicle from the beginning without adhering to a formal break-in schedule. However, during the first few hundred kilometres of driving you can, by observing a few simple precautions, add to the future performance and economy of your vehicle.

We recommend speeds be held up to no more than 80 km/h during the first 500 kilometres. After this initial period, speeds may be increased gradually but up to 1500 kilometres avoid driving for extended periods at any one speed, either slow or fast. Varying the speed to include some higher speeds within the limits of the law, will promote longer life of parts and better economy of oil and fuel. Never subject your vehicle to full throttle acceleration or high speed until the engine is thoroughly warm and after 3000 kilometres has been covered.

It is also recommended that for the first 500 kilometres heavy braking should be avoided, except in the case of emergency, since brake misuse during this period could impair future braking efficiency.

If you plan to use your new vehicle for trailer (caravan) hauling see additional information on Page 15.

REFER PAGE 71 FOR ADDITIONAL INFORMATION ON

HOW TO IMPROVE YOUR FUEL ECONOMY

SAFE DRIVING HINTS & RECOMMENDATIONS

IMPORTANT

These items are listed as a safety reminder to you the owner. The appropriate section of this manual should be referred to for a more detailed explanation.

CARBON MONOXIDE

Avoid inhaling exhaust gases because they contain carbon monoxide, which is colourless and odourless. Carbon monoxide is a dangerous gas that can cause unconsciousness and is potentially lethal. (Refer to page 18.)

SEAT BELTS

Various road laws require the wearing of seat belts. It is important that the habit of using these should be developed by yourself and others using the vehicle. (Refer to page 11.)

In the interest of safety, seat belts should be checked regularly. Your Dealer will inspect and check the belts for you as part of the normal Guardian Maintenance Service. Never attempt to modify or change the seat belt away from the original specification as this will affect the operation of the belts and reduce their effectiveness in preventing injury, in an accident.

ANTI-THEFT IGNITION STEERING LOCK

DO NOT turn the ignition switch away from the ON position while the vehicle is in motion as this renders ineffective any power assisted equipment fitted to your vehicle.

Never select the LOCK position while the vehicle is in motion as this will lock the steering of the vehicle and render it inoperative. (Refer to page 19.)

LOOSE ARTICLES

Do not leave a loose load or articles inside the passenger compartment. Stow articles in the luggage compartment and tie down if necessary. (Refer to page 5.)

BRAKE OPERATION

Driving through water may affect brake performance. Applying the brakes lightly will indicate whether they have been affected. To dry them quickly, lightly apply the brakes while maintaining a slow forward speed with an assured clear distance ahead until brake performance returns to normal. Brake pedal travel should not be obstructed by improper floor mats or other interfering material under the pedal. (Refer to page 25.)

POWER ASSISTED BRAKE

Do not let the vehicle run down steep grades without the engine running.

Do not coast with engine switched off. (Refer to page 26.)

TYRE TRACTION

A decrease in driving, cornering, and braking traction occurs when water, snow, ice, gravel, or other material is on the road surface. Driving practices and vehicle speed should be adjusted to the road conditions. (Refer to page 67.)

COOLING SYSTEM

If the cooling system is hot, the radiator cap must not be removed quickly — it should be rotated slowly to the first stop, which permits the pressure to release slowly through the overflow pipe. (Refer to page 60.)

PETROL FUMES

Always stop the engine and do not smoke or allow open flames or sparks near the vehicle when refuelling. If petrol fumes are noticed while driving, the cause should be determined and corrected without delay. (Refer to page 92.)

SAFETY FEATURES

THE COMPREHENSIVE LIST OF SAFETY FEATURES INCORPORATED IN THE "HZ" SERIES MODELS IS LISTED BELOW

Lane Changer (part of Turn Signal System).

Seat Belts for all Occupants.

Energy Absorbing Steering Column and Steering Wheel.

Anti-Theft Combined Steering/Ignition Lock.

Tandem Brake Cylinder — Dual Hydraulic Circuits.

Spring Loaded Knock-Out Type Internal Rear Vision Mirror Mounting and Shatter-Resistant Mirror.

External Rear Vision Mirror which is Glare Reduced.

Toughened Windshield with Modified Zone.*

Safety Glass Windows.

Glare Reduced — Safety Padded Instrument Panel.

Recessed Instruments and Instrument Panel Controls.

Glare Reduced Instruments and Controls.

Low Profile Window Regulator Handles.

Sun Visors — Energy Absorbing.

Flush Fitting Lift-Up Exterior Door Handles.

* Caprice Models are fitted with a Laminated Windshield.

Safety Door Locks — Handles Free Wheel.

4-Jet Electric Windshield Washer.

2-Speed Windshield Wipers with Glare Reduced, Matt Black, Arms and Blades.

Back-up Lamps.

Fusible Link in Wiring Harness.

2-Speed Heater/Demister Fan.

Brake Failure Warning Light.

Parking Brake Warning Light.

Safety Flanges on Both Rims of Road Wheels.

Front Seat Head Restraints.

Contoured Skid Header Panel Above Windshield.

Floor Mounted Parking Brake.

Flow Through Ventilation.

Underslung Fuel Tank and External Fuel Lines.

Cigarette Lighter Operates on Ignition or Accessory Position Only.

Child Restraint Anchorages.

SECTION—1 BEFORE DRIVING YOUR NEW VEHICLE

SAFETY ASPECTS

BEFORE ENTERING THE VEHICLE

1. See that windows, mirrors and lights are clean.
2. Visually note inflation condition of tyres.
3. Check that area to rear is clear if about to back-up.

BEFORE DRIVING AWAY

1. Be sure you understand your vehicle and how to operate it safely.
2. Be sure all doors are secured and locked.
3. Position seat by adjusting as required.
4. Adjust inside and outside rear vision mirrors if necessary.
5. Fasten seat belts (refer Page 11 for Adjustment Procedure).
6. Check that the warning indicators glow when key is turned to the ON position.
7. Release the parking brake.

HIGHWAY SAFETY DEPENDS ON

1. YOU THE DRIVER
2. THE CONDITION OF YOUR VEHICLE
3. THE TRAFFIC AND HIGHWAY CONDITIONS

. . . **BE SURE YOU UNDERSTAND ALL THREE!**

CAUTION: Do not leave a loose load or articles inside the passenger compartment. Stow articles in the luggage compartment and tie down if necessary.
The above action will prevent loose items from becoming dangerous projectiles in the event of a sudden stop or collision.

REMINDER: Proper Operation, Periodic Maintenance and Safety Inspections help provide

- Economical operation of your vehicle
- Safety for you and your passengers
- Dependable transportation

The following 10 items need regular and conscientious attention in the interest of safety.

If they require rectification an Authorised GMH Dealer will assist you.

BRAKES	EXHAUST SYSTEM
ALL LAMPS	GLASS AREAS
SEAT BELTS	WINDSHIELD WIPERS AND WASHERS
STEERING AND WHEEL ALIGNMENT	REAR VISION MIRRORS
TYRES—CONDITION & PRESSURES	HORN

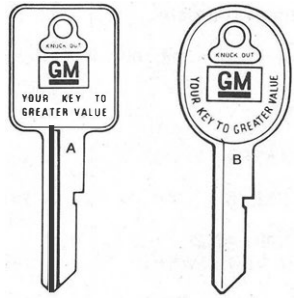
SAFETY MEANS REGULAR INSPECTIONS

KEYS AND LOCKS

KEYS

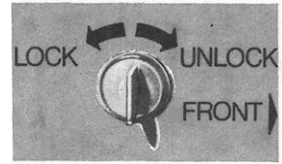
Your vehicle is fitted with a two key locking system which provides a security facility for personal valuables when parking in car parks or similar areas where locking of the vehicle is not permitted.
The Master key (square head) is retained and used by the driver at all times and operates all locks on the vehicle.
The Service key (round head) is left with the vehicle when it is parked in those areas described above and only operates the door locks and ignition switch which enables the vehicle to be moved if required but does not allow entry to the instrument panel or the luggage compartment.

The key code number is stamped on the 'knock out' insert in the key head. Before placing the key on your key ring, punch out the small insert bearing the key code number. Place the insert in a safe place so that if the key is lost duplicates can be ordered from any GMH Dealer by quoting the key code number.

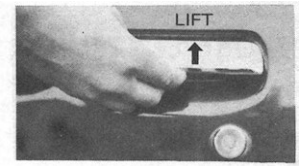


NOTE: During cold weather, moisture may freeze in the door locks. In that case, heat the key with a match or pocket lighter and insert it several times in the cylinder until the lock is free.

DOOR LOCK OPERATION



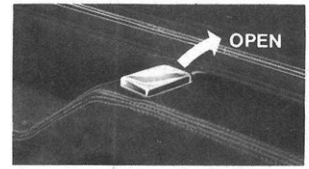
Exterior Lock



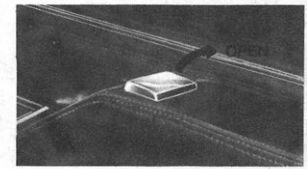
Exterior Handle

OPENING WITH KEY

Both front doors can be unlocked with the key from the outside by turning the top of the key towards the front of the vehicle, before lifting the finger bar to open the door.



Interior Handle Front Door



Interior Handle Rear Door

OPENING WITH HANDLE

All doors are fitted with safety flush fitting handles with a vertical lift to actuate the door locking mechanism, which will free wheel if the internal locking button is still depressed.

LOCKING FROM THE INSIDE

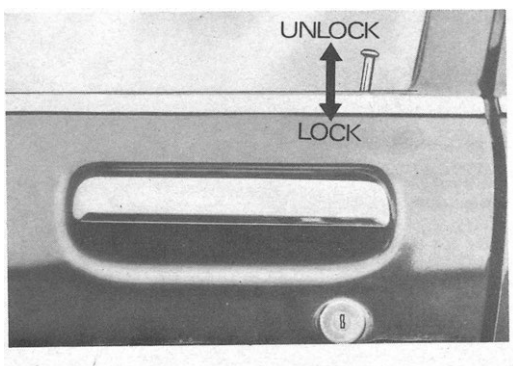
In the interest of safety, all doors incorporate a free wheeling lock mechanism, prohibiting the doors being opened from the outside or inside unless the locking button is first raised.

LOCKING FROM THE OUTSIDE

All doors can be locked from the outside by pressing down the inside locking button while the door is open, then shutting the door.

ELECTRIC DOOR LOCK (where fitted)

The Electric Door Lock System incorporates a solenoid for each door and a master control switch located in the driver's door arm rest. The doors lock and unlock simultaneously from the control switch or manually from each door in the conventional manner. Each solenoid has an internal circuit breaker which, under extreme conditions, may require up to 3 minutes to reset.



Locking Button

COMPARTMENT LOCK OPERATION

INSTRUMENT PANEL COMPARTMENT LOCK

To lock, insert the key, rotate anti-clockwise one quarter of a turn and then withdraw.

To unlock, insert the key and rotate clockwise one quarter of a turn. The key should then be withdrawn before turning the lock clockwise to allow the door to open downwards.

LUGGAGE COMPARTMENT LOCK

Insert the key and rotate clockwise to unlock. The lid will spring open a small distance, thus allowing the operator to lift the lid to its fullest extent for the stowing of luggage.

To shut, simply lower the lid to a position a small distance above the closed position, then quickly and firmly push downwards to engage the lock.

Ensure that no articles are stowed directly in the path of the closing lid, to prevent damage to either the lid or the articles or both.

REMINDER: Do not leave the key inside the luggage compartment or in the lock.

FUEL FILLER LOCKING CAP

Where a locking type fuel filler cap is fitted, two keys are provided, one being a spare.

REAR VISION MIRRORS

INTERNAL REAR VISION MIRROR

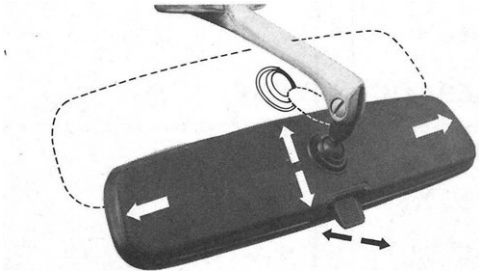
The internal rear vision mirror is shatter-resistant and is mounted on the safety type skid windshield header panel. The design incorporates a spring loaded attachment which can allow the mirror and its mounting to be knocked out as a result of accidental impact, thus lowering the chance of injury.

At the lower end of the mounting arm there is a pivoted arm with a ball end which enables the mirror to be raised or lowered to prevent obscuring forward vision while still maintaining the same angle setting.

The control lever on the lower edge of the mirror enables an anti-glare reflector to be used during night driving, thus reducing headlamp glare from following vehicles.

During normal daylight operation, the lever should be set forward.

During night time operation, in order to reduce the glare of the headlamps from following vehicles, move the lever rearward.



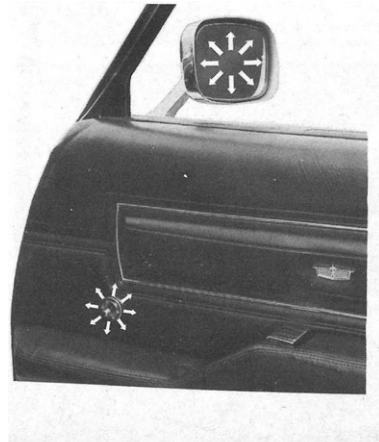
EXTERNAL REAR VISION MIRROR

The external rear vision mirror is mounted on the outside of the driver's front door, and is glare-reduced. It provides the driver with a means to assist in observing traffic which may be about to pass or is in the adjacent traffic lane.

The angle of the mirror can be adjusted by means of a control that is located on the inside of the driver's door.

The change of angle of the mirror is in the same direction as the control movement. When selecting the most suitable angle for the mirror, ensure that the driver's head is in the normal position for driving then adjust the mirror angle to suit.

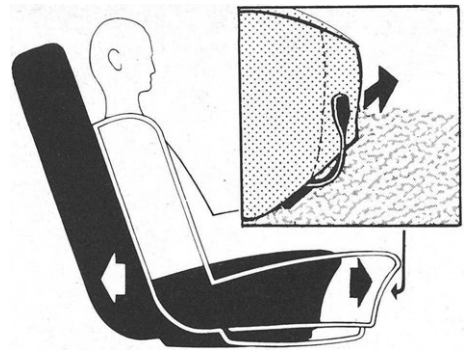
In some areas a passenger's side external mirror is fitted and care should also be taken to correctly adjust the mirror for use by the driver.



FRONT SEAT ADJUSTMENT

BENCH SEAT

In order to adjust the seat in relation to the steering wheel and other controls, the seat can be unlocked at the front by moving the locking lever (positioned at the lower front right hand corner) across to the right, then apply body pressure to move the seat either rearward or forward, as required. The seat mechanism will lock again when the locking lever is released. To ensure that the locks have fully engaged, try to move the seat back and forth.



BUCKET SEAT

FRONT-REAR CONTROL

Each bucket seat has a forward and rearward adjustment control. The adjustment control lever is located to the right of centre at the lower front of the seat. Move the lever across to the right to unlock the adjustment catch.

Try to move the seat back and forth after adjusting to check that the catch is fully engaged.

RECLINING BACK CONTROL

The reclining mechanism is controlled by a large toothed wheel on the outer side of the seat, located at the bottom of the seat back.

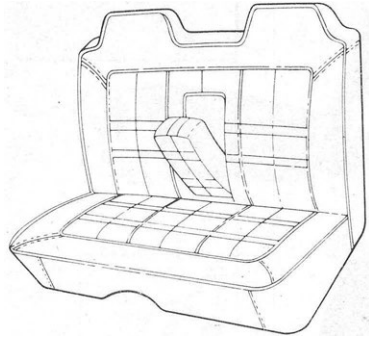
By turning the wheel, the reclining position of the seat can be changed through a large angle, as desired.

The seat back will move in the same direction as the top of the wheel.

CAUTION: To avoid reducing the effectiveness of seat belts it is recommended that reclining seats be used in no more than a semi-reclined position when the vehicle is in motion. The fully reclined position should only be used when the vehicle is stationary.

HEAD-RESTRAINT

This safety feature is not intended to be used as a headrest. It is solely for the reduction of possible injury that may result from a whip-lash neck movement following a vehicle collision.



FRONT SEAT REPOSITIONING

Certain people, due to their lack of height, may consider it advisable to have the front seat repositioned. It is possible to have the seat moved forward 2 cms on the seat mountings, giving decreased leg room. It is suggested that should the necessity arise, this matter be discussed with a GMH Dealer.

WINDOW CONTROLS

MANUALLY OPERATED

All door windows are lowered or raised by use of the low profile window regulator handles. These are fitted with safety designed P.V.C. knobs.

POWER OPERATED

Where fitted, the door window operating motors are connected through the ignition switch so that they cannot be operated unless the key is in the ON position.

DE VILLE

A master switch group for the windows is fitted on the driver's door. On the other doors, a separate single switch is fitted and allows individual control.

CAPRICE

A master switch group for the windows is fitted on the front of the console. On both rear doors a separate single switch is fitted and allows individual control.

WINDOW SWITCH OPERATION

Fitted in Arm Rests.

To Raise — Push outwards — towards door.

To Lower — Push inwards — towards operator.

Fitted in Console.

To Raise — Push upwards.

To Lower — Push downwards.

SEAT BELTS

GENERAL NOTES

Australian Design Rules require Seat Belts to be fitted as standard equipment; therefore, this section should be carefully studied.

In the interest of safety, seat belts should be checked regularly. Your Dealer will inspect and check the belts for you as part of the normal Guardian Maintenance Service. Never attempt to modify or change the seat belt away from the original specification as this will affect the operation of the belts and reduce their effectiveness, in preventing injury, in an accident.

WARNING: Seat belts are designed to bear upon the bony structure of the body, and should be worn low across the front of the pelvis, or the pelvis, chest and shoulders, as applicable; wearing the lap section of the belt across the abdominal area must be avoided.

Seat belts should be adjusted as firmly as possible, consistent with comfort, to provide the protection for which they have been designed. A slack belt will greatly reduce the protection afforded to the wearer.

Care should be taken to avoid contamination of the webbing with polishes, oils and chemicals, and particularly battery acid. Cleaning may safely be carried out using mild soap and water. The belt should be replaced if webbing becomes frayed, contaminated or damaged.

It is essential to replace the entire assembly after it has been worn in a severe impact even if damage to the assembly is not obvious.

Belts should not be worn with straps twisted.

Each seat belt assembly must only be used by one occupant; it is dangerous to put a belt around a child being carried on the occupant's lap.

RELEASING BELTS

To release all belts, simply depress the release button located in the centre of the buckle.

CARE OF SEAT BELTS

Keep the belts clean and dry. Clean with a mild soap solution and lukewarm water. Keep sharp edges and damaging objects away from the belts.
Periodically, inspect the belts, buckles and anchorage points. Damage or fraying that could lessen the effectiveness of the system should be eliminated by replacing the belt assemblies. Do not bleach or dye the belts since this can cause severe loss of strength as also will contamination of the webbing with polishes, oils or chemicals—particularly battery acid.

USING SEAT BELTS

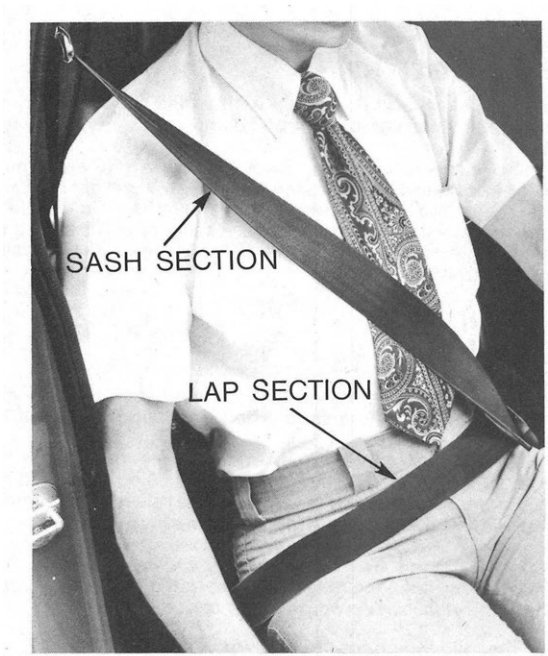
Various road laws require the wearing of seat belts. It is important that the habit of using these should be developed by yourself and others using the vehicle.
The adjustment and operating instructions are detailed in this Section together with the Seat Adjustment it being important that both positions be comfortable in order that the driver may devote his entire attention to the job of driving and observing the road.

IMPORTANT: Don't use belts that are twisted—untwist them before making any adjustments and be sure that they contour around the body comfortably when adjustments are complete.

(Refer to the following pages for important instructions.)

LAP/SASH COMBINATION BELT

A firm, low position across the pelvis by the lap section of the Lap/Sash Combination Belt is essential in order that the force exerted by the Lap Belt in a collision may be spread over the strong hip bone structure and not across the soft abdominal area.



EMERGENCY LOCKING RETRACTOR TYPE

This type of seat belt allows the wearer to move bodily while the seat belt is fastened. It is also dual sensitive.
The first way the locking mechanism is activated is by sudden changes of vehicle speed or vehicle direction, as in the case of firm brake application or vehicle impact during an accident. This phase of the retractor mechanism's operation can be tested by allowing the body to be restrained only by the belt during firm application of the vehicle brakes, at between 2-5 km/h (brisk walking speed) under safe conditions. The belt should lock immediately, stopping all belt movement. The second way the locking mechanism is activated is by a sudden extension of the belt from the retractor housing. This phase of the retractor mechanism's operation can be tested by holding the belt tightly and giving it a sudden firm jerk. The retractor mechanism should lock immediately, stopping all belt movement.
These checks should be carried out regularly.

WARNING: No modifications or additions should be made by the user which will either prevent the seat belt adjusting devices from operating to remove slack, or prevent the seat belt assembly from being adjusted to remove slack.

TONGUE RESTRICTOR

This belt system incorporates a tongue restrictor which can be moved along the belt to locate and hold the tongue in any desired position.

WARNING: The positioning of the tongue restrictor must never interfere with or stop the belt from fully retracting.

BELT ADJUSTMENT

1. Adopt a satisfactory seating position.
2. Bring the metal tongue across the body and snap home the Tongue into the Buckle.
3. After fastening, settle the belt by running a hand under the belt, starting at the outer hip area, then across to the tongue and up the sash section. This will feed back unwanted belt length to the retractor.
4. Finally check the fit and adjustment.

NON-RETRACTOR TYPE

BELT ADJUSTMENT

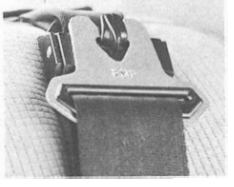
1. Adopt a satisfactory seating position.
2. Bring the metal Tongue across the body and snap home the Tongue into the Buckle.
3. Adjust the belt to obtain a firm fit. A firm, low position across the pelvis by the lap section of the Lap/Sash Combination Belt is essential in order that the force exerted by the Lap Belt in a collision may be spread over the strong hip bone structure and not across the soft abdominal area.

   To Lengthen — Tilt the belt adjuster and then pull the belt at a point below the finger grip bar.

   To Shorten — Tilt the belt adjuster and use the serrated Finger Grip Bar to pull the belt through the belt adjuster.
4. Finally check the fit and adjustment.

BELT STOWAGE

Stowage of the outer section of the belt, is provided by a hook located on the webbing adjuster. These hooks should be used when the belts are not in use to keep them away from door openings.



LAP TYPE BELTS

BELT ADJUSTMENT

1. Adopt a satisfactory seating position.
2. Bring the Tongue Adjuster across the body and snap home the Tongue into the Buckle.
3. Adjust the belt to obtain a firm fit. A firm low position across the pelvis is essential in order that the force exerted by the lap belt in a collision may be spread over the strong hip bone structure and not across the soft abdominal area.

   To Lengthen — Tilt the Tongue Adjuster and pull the belt to the right of the finger grip bar.

   To Shorten — Tilt the Tongue Adjuster and use the serrated Finger Grip Bar to pull the belt through the Tongue Adjuster.

BELT STOWAGE

When not in use these belts should be kept with the tongue latched into the appropriate buckle.

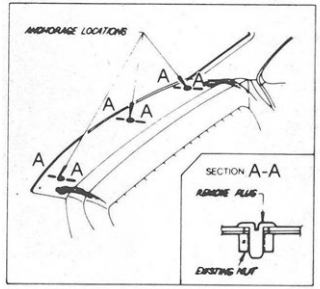
INFANT AND CHILD RESTRAINTS

CAUTION: Children in automobiles should be restrained to reduce the risk of injury in accidents, sudden stops or other hazardous situations.

General Motors-Holden's Dealers can advise you about restraint systems designed specifically for use with infants and small children.

WARNING: Child restraint anchorages are designed to withstand only those loads imposed by correctly fitted child restraints. Under no circumstances are they be be used for adult seat belts or harnesses. Anchorage points for child restraint systems will be provided behind the rear seat of sedan models manufactured by General Motors-Holden's Ltd., after June 30th, 1976. The locations of the anchorage points are shown below.
In using any infant or child restraint system, read and comply with all installation and usage instructions. All unused seat belts should be stowed properly to help prevent them causing injury in the event of an accident.
If a child is travelling in a vehicle not equipped with an approved infant or child restraint or an alternative restraint system, the following precautions should be taken.

1. Infants unable to sit up by themselves should be restrained by placing them in a covered, padded bassinet which is placed crossways in the vehicle (widthwise) on the rear seat. The bassinet should be securely restrained with the regular vehicle seat belts.
2. Children able to sit up by themselves should be placed on a seat and restrained with a seat belt. If the sash section of the belt causes neck or face irritation due to the child's size, this may be reduced in some cases by positioning the child further towards the centre of the vehicle. If serious discomfort continues, the child should be lap belted in the rear seat. Never allow a child to stand or kneel on any seat.
3. General Motors-Holden's recommends that children be restrained properly when riding. However, if unusual conditions prohibit the use of restraints and require that a child must stand, use the floor directly behind the front seat. This will help minimize the possibility of injury from frontal impacts in the event of an accident.



TRAILER (CARAVAN) HAULING

Since passenger vehicles are designed and intended to be used primarily as a passenger conveyance, towing a trailer could affect handling, durability and economy. Maximum safety and satisfaction depend upon the proper use of correct equipment and avoiding overloading and other abusive operations such as that which can occur in rough or hilly terrain.

The maximum loaded trailer weight which you can pull with your vehicle depends on the special equipment that has been installed and the load limits that apply to the model.

(Do not exceed the ratings on page 16.)

TONGUE LOAD

To assist in maintaining good handling of a vehicle-trailer combination, it is important that the vertical load at the trailer attachment coupling be approximately 10% of the loaded trailer weight. This weight distribution can be checked by weighing the loaded trailer first, then checking the load at the attachment coupling, before coupling the trailer to the tongue of the vehicle.

TYRES

When towing a trailer the vehicle's tyres should be inflated to the highest recommended inflation pressures. The rear axle load has to be reduced by an amount equal to the tongue load on the vehicle (i.e. the 10% of the trailer weight) if an equalizing load levelling hitch is not fitted. However, where the latter type of trailer attachment is fitted, it is not necessary to reduce the vehicle's load due to the effect of the attachment's operation, provided the maximum rear axle loading and maximum loaded vehicle weights are not exceeded. (Refer Page 69, Vehicle Weight Chart).

MAINTENANCE—AUTOMATIC TRANSMISSION

More frequent vehicle maintenance is required when using your vehicle to pull a trailer. Where an automatic transmission is fitted the transmission fluid will need to be changed every 12 months or 20,000 kilometres. (Refer Section 5 also.)

RUNNING IN PERIOD

It is recommended that your new vehicle be operated for 1500 kilometres before trailer towing. If it is necessary to tow during this period, avoid speeds over 80 km/h and full throttle starts. The same precaution should be observed whenever a new or reconditioned engine, transmission or rear axle has been installed in the vehicle.

ELECTRICAL CONNECTION

To facilitate connection of the trailer wiring to the vehicle's electrical system, a special wiring harness, which provides protection against overloading the turn signal electrical system, is available through any GMH Dealer or a GM Parts and Accessories stockist. This is the only system recommended by GMH. Use of a non-genuine connection could affect the warranty on the wiring of your vehicle.

CAUTIONS:

1. A frame mounted equalising hitch with a sway control of sufficient capacity is required for trailers over 900 kg loaded weight on all models.

2. Do not use axle-mounted hitches. They can cause damage to the axle housing, wheel bearings, wheels or tyres.

3. Trailer brakes are required on trailers over 500 kg loaded weight except where State Laws may specify a lower limit.

4. Do NOT tap into the vehicle's hydraulic brake system. Operation of the trailer brake system by tapping into the vehicle's hydraulic brake system would require fluid displacement from the vehicle's master cylinder. THE VEHICLE'S MASTER CYLINDER FLUID CAPACITY WILL NOT BE SUFFICIENT TO OPERATE BOTH BRAKE SYSTEMS UNDER ALL CONDITIONS.

5. CAUTION: WHENEVER A TOW-BAR IS REMOVED BE CERTAIN TO HAVE ANY MOUNTING HOLES IN THE UNDERBODY PROPERLY SEALED TO PREVENT THE POSSIBLE ENTRY OF EXHAUST FUMES, DUST AND WATER.

PERMISSIBLE OPERATING LOADS

Before contemplating the towing of a trailer or caravan, it is necessary to check that the correct equipment is fitted to the vehicle to cover both the legal and manufacturer's requirements. Therefore, the matter should be discussed with your Local Authority and a GMH Dealer.

APPLICATION	ALL MODELS		
"A". No brakes fitted to trailer.	— A —	— B —	— C —
"B". Fitted with independently operated trailer brakes and a Standard GM P & A Tow-bar.			
"C". Fitted with an independent driver operated trailer brake system and an equalising load trailer hitch. (Heavy Duty Tow-bar)			
Maximum Trailer Weight (Tare Weight plus all load)	500 kg	900 kg	1,800 kg
Nominal Static Weight to be imposed on the Vehicle Tow-Bar Tongue by the Trailer (10% of the Trailer Weight)	†50 kg	†90 kg	*180 kg

†This weight must be included as part of the load carrying capacity of the vehicle.

DRIVING HINTS WHEN TOWING

NOTE: The use of Super-Lift Shock Absorbers should be considered if regular trailer of caravan operation is to take place.

1. Remember that a vehicle's acceleration, braking and ability to negotiate rough and/or winding roads, etc., are all impaired by the extra weight of a caravan or trailer. During summer time the desired performance should be gauged to avoid overheating the engine and transmission. Making a couple of short distance trial runs is a good way of regaining the feel of your caravan. This will eliminate surprises when you pull out of your driveway on the first leg of a long journey to a holiday resort.

2. Have your engine tuned up and spark plugs cleaned or replaced before you depart.

3. Equip your vehicle on both sides with the extended arm rear vision mirrors necessary to see behind your caravan adequately.

4. Headlamps should be re-aimed for correct setting after the vehicle has been loaded and the trailer coupled.

5. When descending steep grades, don't continually apply the brakes to maintain safe speeds. Instead, use a lower gear, permitting the engine to provide a portion of the required braking action.
   (Refer Page 23 for use of **S** or **L** position.)
   Riding the brake pedal heats up the brakes and reduces braking effectiveness.

6. If your trailer runs off the paved highway surface on to the shoulder, resist the temptation to quickly turn the steering wheel to bring the trailer back on the road. Instead, allow the left wheels of the vehicle to also run off on to the shoulder. Then, wait for a good opportunity to steer the vehicle back on to the road. This will prevent an abrupt swerving reaction and will keep you safely in the traffic lane.

7. Keep your windshield clean, which also means keeping a regular check on the level of the windscreen washing solution container. (Refer Page 63 for Windshield Cleaning.)

8. Make sure the vehicle's radiator is not covered by insects.

9. Be careful to observe all Road Laws, regarding trailer and caravan towing, e.g. Ensure that
   —a hitching chain is fitted.
   —the ball or tongue does not obscure the number plate on your vehicle when the caravan is not hitched.
   —the number plate on your caravan is visible at all times.

SECTION—2 **STARTING AND OPERATING**

EXHAUST GAS

CARBON MONOXIDE WARNING

Avoid inhaling exhaust gases because they contain carbon monoxide, which is colourless and odourless. Carbon monoxide is a dangerous gas that can cause unconsciousness and is potentially lethal.

The best protection against carbon monoxide entry into the driving compartment is a properly maintained engine exhaust system. If you notice a change in the sound of the exhaust system, if exhaust fumes are smelled or detected in any other way inside the vehicle, or if the exhaust system or rear of the vehicle is damaged the vehicle should be taken to a GMH Dealer for inspection.

Have them inspect the complete exhaust system and underbody area for broken, damaged, missing or incorrectly positioned parts, open seams, holes, or loose connections, or other deterioration which could permit exhaust fumes to seep into the driving compartment. Dust or water in the vehicle may be an indication of a problem in one of these areas.

It is recommended that the vehicle be inspected each time it is raised for lubrication.

If at any time you suspect that exhaust fumes are entering the driving compartment have the cause determined and corrected as soon as possible. Use genuine GM parts recommended for your vehicle for any repairs which may be necessary.

If you must drive under these conditions, drive only with all windows fully open.

CAUTION: Sitting in a parked vehicle with engine running for an extended period is not recommended.
Do not run the engine in confined areas such as garages any more than necessary to move the vehicle in or out of the area.

When the vehicle is stopped in an unconfined area with the engine running for any more than a short period, the following instructions should be observed.

Depending on the equipment fitted:

1. With the Forced Ventilation system fitted, close off the normal Flow-through Ventilation outlets then use the fan to pressurize the interior with the control levers set in the appropriate positions. (Refer to the Ventilation section, page 34.)
2. With Air Conditioning fitted, set the fan control at the 3rd or 4th position and the Mode Control Lever away from the ○ or ⟲ positions.

Vehicle rear compartment openings, that is, the trunk lid should be closed at all times during normal driving operations, to prevent exhaust gases being drawn into the vehicle.

However, if for some reason the rear compartment has to remain open while travelling, the following precautions should be observed:

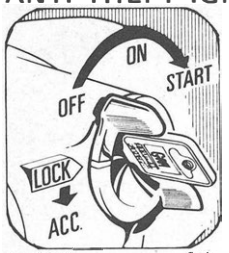
1. Close all windows and fully open whatever ventilation system is fitted. (Outlined above.)
2. Do not exceed 50 km/h unless necessary, according to traffic conditions and regulations.

EXHAUST POLLUTION AND YOUR NEW VEHICLE

Your new vehicle has been designed and equipped with several engine, carburation components and modifications which are intended to minimize the emissions of harmful exhaust pollutants. Refer to the Emission Control Owner's Handbook supplied with the vehicle. One of the requirements for assurance that your vehicle will continue to operate as designed in regard to exhaust emissions and driveability, is the need for proper owner maintenance. Refer to the Owner Guide for maintenance requirements.

STEERING COLUMN CONTROLS

ANTI-THEFT IGNITION/STEERING LOCK



The anti-theft lock is located on the right hand side of the steering column and has five positions:

ACC (1st Back from Lock) — Permits operation of electrical accessories when the engine is not running. To engage, push the key in and turn toward you (counterclockwise).

LOCK (Normal Parking Position) — Locks the ignition and provides an added theft protection by preventing normal operation of the steering wheel. The key cannot be returned to LOCK position without depressing the locking barrel.

OFF (1st Forward from Lock) — Permits turning the engine off without locking the steering wheel.

ON (2nd Forward from Lock) — Normal operating position. The ignition circuit and the electrically operated instruments are energised.

START (3rd Forward from Lock) — Permits engagement of the starter.

CAUTION: Do not turn the ignition switch away from the 'ON' position while the vehicle is in motion as this renders ineffective any power assisted equipment fitted to your vehicle.

Never select the 'LOCK' position while the vehicle is in motion as this will lock the steering of the vehicle and render it inoperative.

PARKING: When leaving your vehicle unattended:

1. Apply the parking brake (Refer to Page 27).
2. Place transmission selector in Park.
3. Turn key to LOCK position.
4. Remove key.
5. Lock all doors and windows.

POWER STEERING

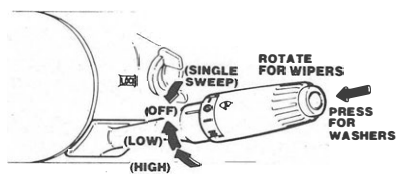
While the location and relationship to the steering linkage is the same as for the normal unit, an integral servo system has been designed to achieve a high degree of compactness together with a variable ratio characteristic which makes for reduced steering effort at either end of the effort scale.

CAUTION: Power Steering assistance is provided by a hydraulic pump driven by the engine. The power steering is rendered ineffective when the engine is not running, if the power steering pump drive belt breaks or if the pump reservoir is empty of fluid.

Do not drive the vehicle under these conditions.

WINDSHIELD WIPERS AND WASHERS

The wiper and washer mechanisms operate when the ignition switch is in either the ON or ACC positions.



WIPER OPERATION — The windshield wipers are operated by turning the end of the stalk clockwise from the O position:

— Position for slow wiper speed.

= Position for fast wiper speed.

To stop the wipers, turn the stalk back to the O position. An extra position is provided which operates the wipers for a single sweep only.

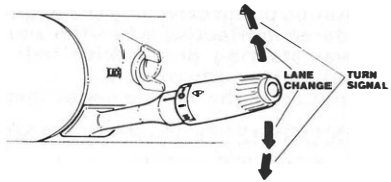
From the O position turn the stalk anti-clockwise to the **I** position and release. The stalk will return to the O position and the wipers will sweep once across the windscreen and return to their rest position.

Dwell Control (where fitted). Refer to Page 33.

WASHER OPERATION — By depressing the button on the end of the stalk the electric washer pump is activated, spraying jets of fluid onto the area swept by the wiper blades. Washer fluid supply will only continue while the button is depressed.

If the windshield wipers are not in operation at the time, depressing the button will automatically start them operating on slow speed and keep them operating until turned off.

TURN SIGNAL OPERATION

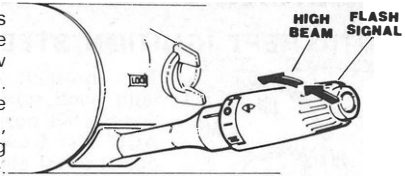


To operate the turn signal (Direction Indicator) lights, the ignition switch should be in the ON position.
When the combination stalk is moved up or down, a tell-tale green light will flash intermittently, indicating in which direction it is intended to turn. As the steering wheel returns to the straight ahead position, the indicator mechanism automatically cancels the signal and the lever returns to its neutral position.
Both the front and rear external turn signal lights will flash together according to the direction selected.
Proper functioning of the turn signal lamps is indicated by normal flashing of the green tell-tale lights on the instrument panel as well as by an audible clicking signal from the flasher timing unit. If the tell-tale signal should increase appreciably in flashing speed and the clicking signal is not audible or if the tell-tales do not flash when the turn signals are operated, a malfunction exists in the system, which should be attended to immediately in the interest of your safety and other road users.

LANE CHANGE INDICATION

Using the two-stage operation it is possible to signal lane changing by exerting slight finger pressure on the stalk in the direction of intended vehicle movement. On release of finger pressure the stalk will return to the neutral position.

HEADLAMP DIPPING



The combination stalk is also used to change the headlamp beam from low to high or high to low. To select high beam move the stalk rearward, towards the steering wheel and then release. Repeating this operation will change the beam from high back to low.

This means that each time the stalk is moved in this manner, the light beam will change. When the headlamps are operating on high beam a blue light located on the instrument panel will glow.

It is also possible to flash the high beam for signalling purposes without operating the light switch by moving the stalk rearward, towards the steering wheel. A light resistance will be felt at the flash position. Further movement towards the steering wheel will cause dip switch operation. The lights will remain on high beam as long as the stalk is held up.

FOUR HEADLAMP SYSTEM

Operating the dipper switch alternates the light beams on the outer two headlamps between low and high beam. The inner two headlamps operate only when high beam is selected.

HORNS

Both a low note and a high note horn are fitted, which can be operated at any time by pressing either the bar which is situated across the steering wheel on De Ville models or the centre horn button on Caprice models.

STARTING AND DRIVING

The following suggestions for starting and driving should be followed to assure the best operation of your new vehicle:

PARKING BRAKE

Ensure that the parking brake is applied firmly while starting the engine. Release the brake just before driving away.

TRANSMISSION

Place the gear selector lever in the N or P position. The neutral safety switch will not allow the engine to start in any other position.

8 CYLINDER ENGINE

COLD OPERATION

The eight cylinder engines are equipped with an automatic choke system. Before starting a cold engine, press the accelerator pedal slowly to the floor and completely release it again. This action sets the choke system for starting. Turn the ignition key to the START position until the engine is started. If the engine fails to start within a few seconds, turn the key to the OFF position then depress and release the accelerator pedal before turning the ignition key to the START position again. Release the key when the engine is started. If the vehicle has been standing for several days, it may be necessary to repeat this procedure a few times until the engine starts. After the engine has started, allow it to run at fast idle for at least 10 seconds before engaging gears. Do not KICK DOWN, i.e. do not depress the accelerator pedal in an attempt to lower the engine idle speed. While the engine is running, the automatic choke gradually moves to the off position as the engine reaches normal operating temperature. In temperatures below 0°C, let the engine run at fast idle in NEUTRAL for at least one minute. Without touching the accelerator pedal, put the automatic transmission into DRIVE and wait for a few seconds for the engine to steady itself before driving away.

WARM OPERATION

To restart a warmed up engine, hold the accelerator pedal in the half depressed position and turn the ignition key to the START position. Release the key when the engine is started.

NOTE: Pumping the accelerator pedal can cause flooding of the engine and difficulty in starting. Should this occur, depress and hold the accelerator pedal fully to the floor while turning the ignition key to the START position. After the engine starts, release the key and let the accelerator pedal return to the closed thhrottle position.

INITIAL DRIVING

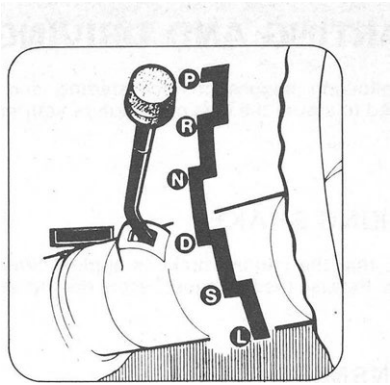
Depress the main brake pedal and release the parking brake. Place the gear selector lever into the DRIVE or REVERSE position. Release the brake pedal. Lightly depress the accelerator pedal to set the vehicle in motion.

TRANSMISSION CONTROLS

This transmission is of an automatic three-speed design. The shift patterns are arranged with PARK (P) position at one end followed in sequence by R (REVERSE), N (NEUTRAL), D (DRIVE), S (SECOND) and L (LOW). The automatic transmission is connected electrically through a neutral safety switch designed to permit starting of the engine **only** when the transmission selector is in PARK or N positions. After starting the engine you need only to select the range desired (normally D), release the parking brake and gradually depress the accelerator. Gradual accelerator pressure will give the best fuel economy — Hard acceleration gives top performance, but lowers the fuel economy.
For additional braking effect, as is sometimes needed in mountainous terrain, select either S or L positions (Refer to later notes regarding speed limit recommendations).

COLUMN SHIFT Where fitted, the column mounted shift lever features a spring loading against a stepped segment.

By keeping the lever raised, selection from L to P or P to L, and any intermediate positions can be made.

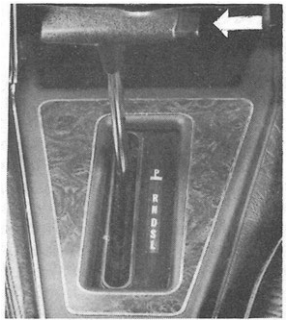


FLOOR SHIFT Where fitted, this console located T-handle shift lever features a straight-line movement.

Shift Lever Sequence: P to L — Depress thumb-button to move from P.
Release of button before R will still allow selection through to R, to N, to D. Depress button again to select S or L.

Shift Lever Sequence: L to P.
L to S to D to N can be selected without depressing the thumb-button. Depress button to select R or P.

By keeping the thumb-button depressed, selection through from L to P or P to L, and any intermediate positions can be made.



THE OPERATIONAL PROCEDURES FOR EACH SELECTOR POSITION ARE:—

PARK — This position is to be used in conjunction with the parking brake. **P** must never be selected when the vehicle is in motion. It is one of only two positions (the other is **N**) in which your vehicle may be started.

REVERSE — For reversing; the vehicle must be stationary before selecting this gear.

NEUTRAL — This position can be used to start the engine, especially if the vehicle is moving with a stalled engine; but never select **N** while driving normally. Also, if the vehicle has to be towed using the rear wheels, this position must be used. (Refer also to page 46.)

DRIVE — For all normal forward driving. This position allows for the acceleration and cruising adequate for all but the most crucial driving situations. It permits the transmission to operate through its complete range of gear ratios and select the proper ratio for road and load conditions.

SECOND — This position may be selected when travelling down a moderate grade where slight braking action is desired without brake application and the transmission will shift to second gear when the selector lever is placed in **S**.

Do not exceed 130 km/h when operating in this range.

LOW — This position may be selected for maximum braking down severe grades under suitable conditions. When the selector lever is moved to **L**, the transmission will shift to first gear. The transmission selector must be shifted back to **S** or **D** positions before the transmission will again upshift.

Do not exceed 70 km/h when operating in this range.

PASSING (Full Throttle Detent)

While driving, if the accelerator pedal is pressed down hard, in order to accelerate or pass other traffic, the following shift changes will normally occur automatically. The speeds given are only an indication as they may vary according to the rear axle and tyre options fitted.

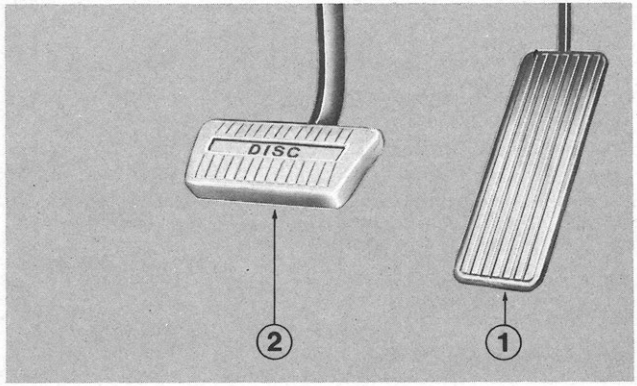
NOTE: If the down shift described in the chart below does not occur when the accelerator pedal is pressed down hard, the kick-down switch at the top of the accelerator pedal may need to be re-set. To do this push the switch plunger as far forward as possible and then depress the accelerator gently to the floor. This procedure correctly pre-sets the switch. (Your Dealer can advise you on this procedure.)

SELECTION	SPEED RANGES AND EFFECT
SHIFT LEVER IN **D**	Under 105 km/h the transmission will change into second gear. When the vehicle speed reaches 120 km/h it will change back into third gear.
SHIFT LEVER IN **D**	Under 40 km/h the transmission will change into first gear. When the vehicle speed reaches 65 km/h it will change back into second gear, and then at 120 km/h back to third gear.
SHIFT LEVER IN **S**	Under 40 km/h the transmission will change into first gear. When the vehicle speed reaches 65 km/h it will change back into second gear. Do not exceed 120/km/h when operating in this range.
SHIFT LEVER IN **L**	No changes will occur. Do not exceed 70 km/h when operating in this range.

AUTOMATIC TRANSMISSION—DRIVING DON'TS

- Do not use high engine R.P.M., with the brakes applied in **L, S, D** or **R** positions as this will cause damage to the transmission by overheating.
- Do not hold the vehicle on an upgrade by increasing engine R.P.M. Use the brakes.
- Do not shift selector into **R** or **P** positions before coming to a complete stop.
- The vehicle tends to creep or move when the selector is moved to **L, S, D** or **R** positions. Application of the main brake or parking brake will hold the vehicle until motion is required.
- Do not coast the vehicle when in **N** at any time.
  Leaving the vehicle in one of the driving positions allows the engine to supply some braking force when stopping and also helps keep your vehicle under control at all times.

FLOOR CONTROLS



1. Accelerator Pedal.
2. Main Brake Pedal.

BRAKE OPERATION

CAUTIONS: Driving through water may affect brake performance. Applying the brakes lightly will indicate whether they have been affected. To dry them quickly, lightly apply the brakes while maintaining a slow forward speed with an assured clear distance ahead until brake performance returns to normal.

Brake pedal travel should not be obstructed by improper floor mats or other interfering material under the pedal.

Riding the brake by resting your foot on the brake pedal when not intending to brake, can cause abnormally high brake temperatures, excessive lining wear and possible damage to the brakes.

BRAKE FAILURE WARNING LIGHT

(Refer to Page 31 — Indicator Lights.)

In the event of the warning light being activated while the vehicle is moving and after the main brake pedal has been firmly used, pull across to the side of the road, braking as carefully as possible, but remember that:

1. Stopping distance will probably be greater.
2. Great pedal effort may be required.
3. Pedal travel should be greater.

Then, try, if the road gradient is considered sufficiently safe, to stop the vehicle from a low speed several times, bearing in mind that:

1. If you judge such operation to be safe, proceed cautiously at reduced speed to the nearest GMH Dealer for inspection and rectification.

OR

2. If in your opinion the vehicle is not safe to drive, have it towed to a GMH Dealer for inspection and repair.

CAUTION: Continued operation of the vehicle for normal use in this condition is dangerous.

NOTE: The addition of this warning indicator is not a substitute for the normal maintenance check of brake fluid level in the master cylinder.

DUAL CIRCUIT BRAKE SYSTEM

The foot operated brake system of your vehicle has two separate hydraulic systems — one operating the front wheels, the other operating the rear wheels. Hydraulic pressure is provided from the foot activated master cylinder which is a tandem design, and provides hydraulic pressure to each system.

Therefore, in the event of either the front or rear system being damaged and developing a fault through leakage, one set of wheels can still be braked with reduced effectiveness under increased braking pressure.

An attentive driver should immediately be aware of any change in the operating feel from the brake pedal in regard to length of travel and brake effectiveness as related to the pedal pressure applied — any change in normal operation at once indicates a non-standard condition and the situation should be carefully watched for a return to normality or checked at the nearest GMH Dealer or a service station, depending on the urgency of the situation.

POWER ASSISTED BRAKE NOTES

Power assisted brakes utilize engine intake manifold vacuum to reduce the braking effort required at the pedal. A built-in vacuum reserve will supply two or more brake applications after the engine has stopped.

With the engine switched off and the vacuum reserve exhausted the vehicle can still be stopped but much more effort will be required applying the brake pedal.

CAUTION: Where power assisted brakes are fitted;

NEVER let the vehicle run down steep grades with the engine SWITCHED OFF.

NEVER coast with the engine SWITCHED OFF.

NEVER have the vehicle towed on four wheels without a solid connection between the towing vehicle. If necessary the vehicle will have to be towed by a tow-truck, i.e. with two wheels off the ground.

DISC BRAKES

No adjustment is required as the disc brakes automatically adjust themselves to compensate for brake pad wear.

A single piston floating head caliper is used to operate the clamping of the brake pads against the disc faces.

Also, with this braking system, a proportioning valve is incorporated in the hydraulic system. The function of this valve is to help avoid premature rear wheel lock-up under emergency braking conditions.

BRAKE ANTI-LOCK CONTROL (Where Fitted)

This system reduces the possibility of locking the rear wheels during a panic stop or other hard application of the brakes and so helps maintain maximum controlled braking.

PARKING BRAKE

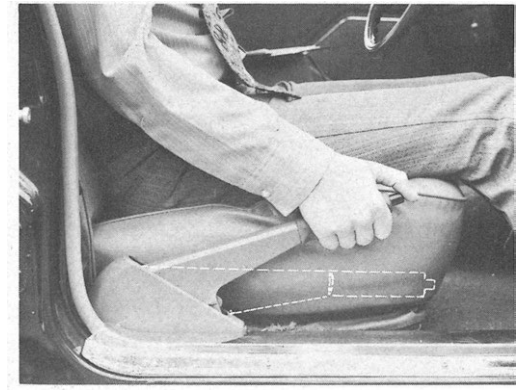
The parking brake activating lever is mounted on the floor at the driver's side of the front seat between the seat and the door.

Whether released or applied, the lever remains down, therefore, it is not possible to tell if the brake is on, by the lever position. However, this type of mechanism enables the lever to stay clear of the driver when entering or leaving the vehicle.

To Apply. Pull the lever straight up using the grip at the end of the lever. **do not press the release button.**

To Release. Pull the parking brake lever upwards while simultaneously pressing in the release button at the end of the lever with the thumb. After the ratchet system disengages, retain pressure on the button while lowering the lever.

(Refer Illustration.)



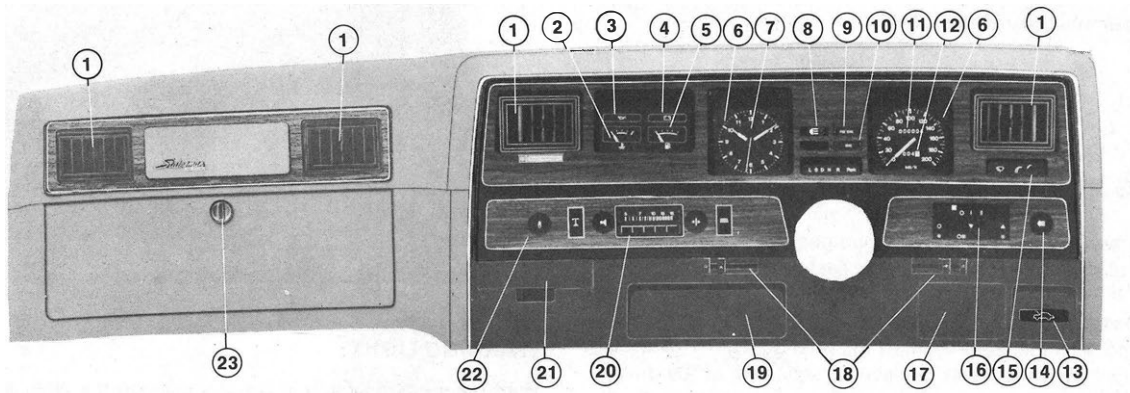
WARNING LIGHT

With the ignition switch in the ON position the warning light will operate while the brake is not fully released.
When the brake has been fully released the parking brake warning light in the instrument panel will go out.
Never drive the vehicle with the warning light on.

ACCELERATOR PEDAL

The accelerator pedal is used to open and close the carburettor throttle valve to vary engine power and thus regulate engine and vehicle speed.

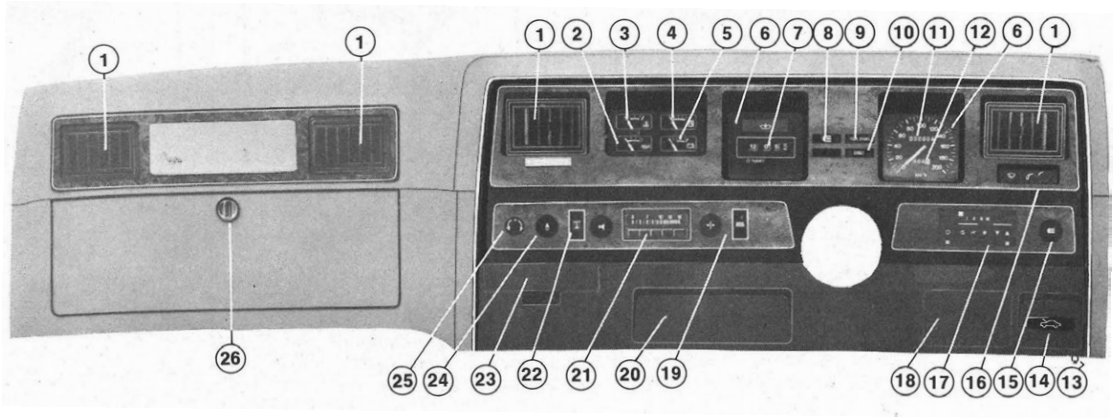
STATESMAN DE VILLE INSTRUMENT PANEL



1. Upper Level Flow Through Ventilation Outlets.
2. Temperature Gauge
3. Oil Pressure Warning Light.
4. Generator Warning Light.
5. Fuel Gauge.
6. Turn Signal Indicators.
7. Clock.
8. Headlamp High-Beam Indicator.
9. Parking Brake Warning Light.
10. Brake System Failure Warning Light.
11. Speedometer.
12. Odometer.
13. Engine Hood Release Knob.
14. Light Switch
15. Dwell Wiper Control.
16. Ventilation Controls.
17. Fuse Block Cover Panel
*18. Lower Level Flow-Through Ventilation Slide Controls
19. Instrument Panel Storage Compartment.
20. Radio.
21. Ash Tray.
22. Cigarette Lighter.
23. Instrument Panel Compartment Lock.

* Delete when optional Air Conditioning is fitted.

STATESMAN CAPRICE INSTRUMENT PANEL



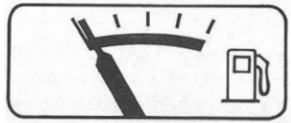
1. Upper Level Flow Through Ventilation Outlets.
2. Oil Pressure Gauge.
3. Temperature Gauge.
4. Fuel Gauge.
5. Voltmeter (Incorporates Generator Light).
6. Turn Signal Indicators.
7. Clock.
8. Headlamp High-beam Indicator.
9. Parking Brake Warning Light.
10. Brake System Failure Warning Light.
11. Speedometer.
12. Odometer.
13. Remote Control Luggage Compartment Lock Button.
14. Engine Hood Release knob.
15. Light Switch.
16. Dwell Wiper Control.
17. Ventilation Controls.
18. Fuse Block Cover Panel.
19. Heated Rear Window Switch.
20. Instrument Panel Storage Compartment.
21. Radio.
22. Power Antenna Switch.
23. Ash Tray.
24. Cigarette Lighter.
25. Rear Speaker Balance Control.
26. Instrument Panel Compartment Lock

STANDARD INSTRUMENT DIALS

SPEEDOMETER AND ODOMETER

The Speedometer face incorporates the odometer digits to show the distance travelled in kilometres. The speedometer is calibrated from 0 to 220 kilometres per hour (km/h).

VOLTMETER (WHERE FITTED)
The voltmeter indicates the condition of the electrical charging system. Normally the needle will remain in the central area of the dial.
Needle movement to the left red zone indicates a low voltage condition. Needle movement to the right red zone indicates a high voltage condition. In either of these cases, the electrical charging system will require checking. A generator charge indicator is incorporated in the dial face.



FUEL GAUGE

This gauge is electrically operated to indicate the proportionate amount of fuel contained in the fuel tank. The gauge is activated when the ignition switch is turned to the ON position.
If the needle is operating in the graduations to the left of the gauge it means that the fuel level in the tank is getting low.

TEMPERATURE GAUGE

The gauge is calibrated to indicate the relative operating temperature of the cooling system. If the needle reaches the red section, (indicating high temperature) the engine should be stopped and allowed to cool down before attempting to locate the cause of the problem. (Refer page 56 for over heating instructions.) Check that no visible leaks are apparent from the cooling system or that the fan belt is not slipping or broken.

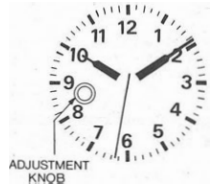
OIL PRESSURE GAUGE

(WHERE FITTED)
The oil pressure gauge indicates the relative operating pressure within the engine lubricating system.
Should the gauge fail to indicate a reading or if the needle moves towards the RED section of the gauge (indicating low pressure) when the engine is running above idle speed, it should be stopped and the reason for the loss of oil pressure found and corrective action taken.

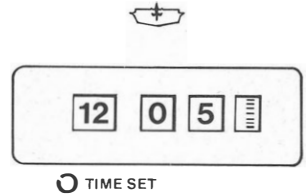
CLOCK

The clock is electrically energised, the time setting is adjusted by pulling out the knurled knob in the corner of clock face to engage and rotate the dial hands or dial numerals. To fulfil its function, the clock operates at all times.
Note: The adjuster on dial type clocks is also a starter and is operated by pulling it out and allowing it to snap back.

DIAL TYPE



DIGITAL TYPE



INDICATOR LIGHTS

GENERATOR

The red light will glow when the ignition switch is turned to the ON position. After the engine has been started, the light will go out and remain out. If the light should glow after the engine is running, the fault causing the problem should be located and corrective action taken.

TEMPERATURE†

The light will glow when the ignition switch is turned to the START position and will go out when the switch returns to the ON position. This system provides a regular check to see that the warning light is operating correctly. If the light comes on while driving, it could indicate overheating of the engine. The engine should be stopped and allowed to cool down before attempting to locate the cause of the problem. (Refer to Page 56 for over-heating instructions.) Check that no visible leaks are apparent from the cooling system and that the fan belt is not slipping or broken.

OIL PRESSURE†

The red light will glow when the ignition switch is turned to the ON position. After the engine has been started, the light will go out and remain out. If the light should glow after the engine is running above idle, stop the engine and the reason for the loss of oil pressure should be located and corrective action taken.

† Not fitted where a gauge is supplied.

PARKING BRAKE WARNING

When the parking brake is applied with the ignition switch in the ON position, the light will glow until the parking brake is fully released.

BRAKE FAILURE WARNING

If the indicator light glows at any time, it would indicate that there may be something wrong with the hydraulic braking system. Immediately the indicator light glows, under these conditions, stop on the side of the road as carefully as possible. Do not proceed until satisfied that cautious progress is possible or that the cause of the problem has been located and rectified.
(Reference should be made to brake operation on Pages 25-27.)

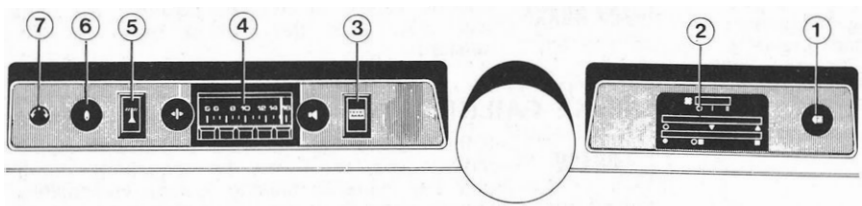
HIGH-BEAM

When the headlamps are on high beam a blue light located on the instrument panel will glow.

TURN SIGNAL

There are two green arrow-head turn signal indicators in the instrument face.
The right hand indicator is located in the top right hand corner of the speedometer and the left hand indicator is located in the top left hand corner of the clock face. The appropriate indicator will flash in the direction signalled.
(Refer to Page 20 for operating details.)

INSTRUMENT PANEL CONTROLS



1. Light switch.
2. Forced ventilation heater-demister (or optional air conditioning) control facia.
3. Heated rear window switch (where fitted).
4. Radio.
5. Power antenna switch.
6. Cigarette lighter.
7. Rear speaker balance control (where fitted).

LIGHT SWITCH

Headlamps, tail lamps, parking lamps, instrument lighting and interior lighting are controlled from a single switch located on the driver end of the lower instrument panel.
The various operating positions of the switch control the lamps in the following order:—

FULLY IN
No lighting switched on, but the interior lighting may be used. (Refer to Rotary Control — Interior Lighting.)

OUT TO FIRST STOP
Parking, Tail, Licence Plate and Instrument Panel Lighting is switched on.

OUT TO SECOND STOP
The headlamps are switched on in addition to parking, tail, licence plate and instrument panel lighting.

ROTARY CONTROL—INSTRUMENT LIGHTING
The brightness of the instrument lighting may be controlled by rotating the Light Switch, the brightness increasing as knob is turned anti-clockwise and decreasing when turned the other way, when the switch is in one of the out positions.

ROTARY CONTROL—INTERIOR LIGHTING
This lighting may also be switched on through rotary control of the Light Switch and will be switched on when it is turned fully anti-clockwise.

CONSOLE FLOOR SHIFT SELECTOR
Where fitted, the internal lighting of the console is controlled with the instrument panel lighting.

HEATER DEMISTER CONTROLS OR OPTIONAL AIR CONDITIONING CONTROLS

(Refer Pages 34-38 of the ventilation section for the correct method of operation of these controls.)

HEATED REAR WINDOW SWITCH

Where fitted, this enables the rear window interior surface to be heated by the conducting stripes adhered to the glass. The heating action will disperse any internal fogging or condensation in cold and/or humid conditions.
When switched on a light in the switch will glow as a reminder.
As soon as the condensation has cleared the heating should be switched off.

RADIO AND POWER ANTENNA

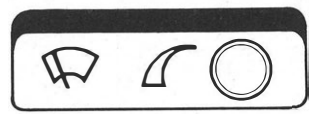
The manufacturer's instructions, relating to the operation of the radio and power antenna are supplied.

CIGARETTE LIGHTER

The Cigarette Lighter is activated only when the ignition switch is in the ON or ACC positions.

To operate, simply press in the lighter knob. It will stay in until the element is hot at which time the lighter will automatically pop back to its original position ready for use.

DWELL CONTROL



The dwell control can be switched into operation by turning the knob in a clockwise direction, from the initial position, which progressively increases the dwell period between wiper blade sweeps.

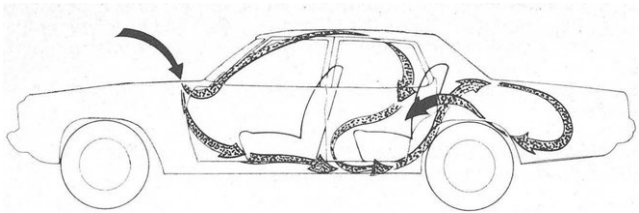
Operation of the wiper blade speed control in either Slow or Fast positions will override the dwell control setting. If the wiper speed control is returned to the OFF position, the dwell control will take over at the particular setting being used. To turn off the dwell control, the knob must be turned back in the anti-clockwise direction to the switched OFF position.

VENTILATION SYSTEMS

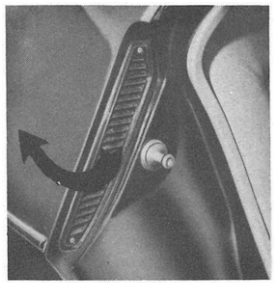
EXPLANATION OF SYMBOLS FOR VENTILATION CONTROLS

Symbol	Heater-Demister with Forced Ventilation	Air Conditioner	Symbol Logic — Remarks
		This symbol is used on various controls in each of the ventilation systems. AT ALL TIMES IT MEANS 'OFF' OR 'SHUT' FOR THAT CONTROL.	
	—	Mode Control Lever	Recirculation of inside air— and this is passed through the refrigerator core, being cooled and dehumidified. This extracts moisture, dust and pollen from the air, leaving it relatively cleaner and dryer.
	—	Mode Control Lever	Outside air is drawn in—
	Distribution Control lever	Mode Control Lever	Direct intake of outside air. Air Conditioning Unit — This air can also be heated.
	Distribution Control Lever	Mode Control Lever	Outside air is distributed to the windshield for demisting and it can also be heated.
	Distribution Control Lever	Mode Control Lever	Outside air is distributed to the central floor outlets and it can also be heated.
	Fan Control Switch	Fan Control Switch	2-Speed Fan with Heater-Demister Unit. 4-Speed Fan with Air Conditioning Unit.
(Blue)	Temperature Control Lever	Temperature Control Lever	Heater-Demister Units — outside air only is available. Air Conditioning Unit — Cooled or outside air is available.
(Red)	Temperature Control Lever	Temperature Control Lever	Heater-Demister Units — Heated outside air only is available. Air Conditioning Unit — Cooled and reheated or, heated outside air is available.

FLOW-THROUGH VENTILATION SYSTEM

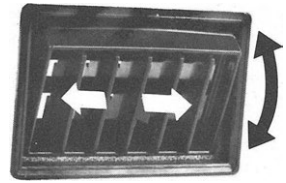


The vehicle features a flow-through ventilation system which will operate with all the windows closed. Fresh air is ducted into the vehicle through the plenum chamber in front of the windshield and enters the passenger compartment via outlet ducts located in and below the instrument panel.
Two relief valves are provided to complete the control of the flow-through system and acts as exhaust outlets to the atmosphere for stale air.
These are located on the rear body pillar.
Note: Don't allow the plenum inlet grille to be covered or clogged with leaves, snow, etc.



LOWER LEVEL VENTILATION
(Not with air conditioning)
There are two outlet ducts located below the instrument panel, one at either end. The air flow to the foot wells can be regulated by adjusting the lower ventilation adjuster knob marked ≡ and located on both sides of the steering column in the instrument panel.

UPPER LEVEL VENTILATION
(This system is not applicable with air conditioning)
Air enters the passenger compartment via four outlets one either end of the instrument panel for normal ram air and two outlets located in the centre of the instrument panel for forced air ventilation.
Horizontal direction adjustment of air flow can be made by position of vane louvres as directed. Air flow can be shut off by positioning the louvres to the closed position.



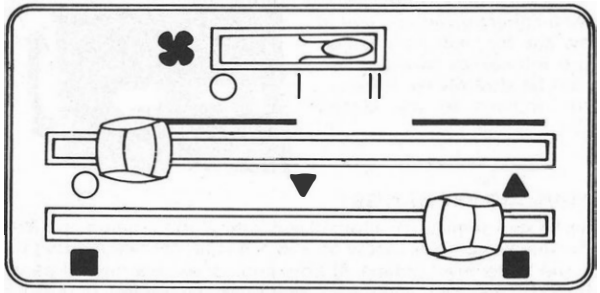
POSITIVE AIR EXCHANGE
When a heater-demister or a forced ventilation unit is being operated and the vehicle speed is below 55 km/h, it is recommended that the upper and lower level outlets, at both ends of the instrument panel, are shut off. This will prevent recirculation of the interior air through the plenum chamber, and so retain the full flow-through effect, under these operating conditions.

DUSTY CONDITIONS
The main cause of dust entering the passenger compartment while a vehicle is moving is the air pressure decrease that occurs in the compartment.
Therefore, under reasonably comfortable conditions it is normally best not to open the windows; **particularly in dusty conditions.** If, for any reason, it is considered desirable to open a window, one on the windward side may be preferable.

Reference should be made to the operating instructions for the various ventilation systems, to fully understand the controls.

HEATER/DEMISTER WITH FORCED VENTILATION

Where this unit is fitted, the control facia is positioned between the driver's door and the steering column, together with the light switch.



Heater-Demister with Forced Ventilation Controls

Heated air can only be supplied to:

(a) the demisting ducts,
(b) the central floor outlets under the instrument panel.

Heated air is not available from the upper level outlets in the instrument panel.

FORCED VENTILATION

This system can be operated while stationary or while moving at a slow speed to supplement the normal ram air ventilation system. Air flow is boosted by using the blower fan. The volume of air entering through the two centre outlet ducts can be controlled by selecting either of the two fan speeds.

1. DISTRIBUTION CONTROL LEVER

O By positioning the distribution control lever into this position and the Temperature Control Lever to the position, unheated air enters the passenger compartment via the two centre dash outlets.

▲ All air is directed to the base of the windshield for demisting purposes.

▼ Most of the air is directed to the central floor outlets while the remainder is bled to the demisting system.

2. TEMPERATURE CONTROL LEVER

With the lever on the blue block no air is being heated. As the lever is moved towards the red block an increasing proportion of the air flow will be heated.

When the lever reaches the red block all air is being heated.

3. FAN SWITCH

O — The fan is switched off.
I — 1st (LO) speed.
II — 2nd (HI) speed.

The fan will only operate when the ignition switch is in the ON or ACC positions.

Use the fan to boost the air flow whenever it is considered desirable.

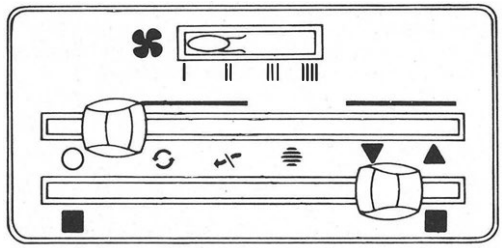
Note: By adjusting the controls provided, a range of conditions can be achieved which are the most desirable for personal comfort.

INTEGRATED AIR CONDITIONING (WHERE FITTED)

Where this unit is fitted, the control facia is positioned between the driver's door and the steering column, together with the Light switch.

1. Fan Speed Switch.
2. Mode Control Lever.
3. Temperature Control Lever.

NOTE: Every week for 10 to 15 minutes the control levers should be moved to the positions, as follows, unless normal operation has regularly included these positions: Mode Control to ↻ or ↙ and Temperature Control to Full Heat.



MODE CONTROL LEVER OPERATION CHART NOTES

1. Where maximum cooling effect is desired for the driver, the two passenger side outlets should be closed off.
2. All air is passed through the refrigerator core being cooled and dehumidified. This extracts moisture, dust or pollen from the air, leaving it cleaner and relatively dryer. Heating of this air can be achieved by moving the temperature control to the desired position.
3. Incoming air is taken directly from the plenum chamber and will therefore contain any dust, pollen or moisture present in the outside air.
4. Use of the temperature control lever will provide the desired level of heating.
5. Maximum effect is achieved for heating or cooling; also for reducing intake of outside fumes from passing vehicles while retaining interior pressurisation.

POSITION	DISTRIBUTION	COOLING	HEATING	AIR
○	NONE	NONE	NONE	NONE
↻	THROUGH OUTLETS IN INSTRUMENT PANEL	2 YES	4 ASSELECTED	5 RECIRCULATED
↙				OUTSIDE
❋		3 NONE		
▲	DEMIST			
▼	FRONT FLOOR			

Mode Control Lever Operation

TEMPERATURE CONTROL LEVER

The lower level on the air conditioner control panel varies the temperature of the air at the outlets from a minimum, which may be as low as 5°C to a maximum of over 38°C.
The temperature can be adjusted by moving the lever to a position between the Blue Block (Cold) and the Red Block (Hot).

FAN SPEED SWITCH

The air flow through the system is controlled by a four speed fan, and is operated by the switch located on the control facia.
The fan lever has four positions from left to right. The fan operates automatically when the ignition/steering lock is switched to the ON or ACC positions, regardless of the switch position, with the exception of the off ○ position on the Mode control Lever, in which case the complete system in non-functional.

FLOW-THROUGH VENTILATION

It should be noted that if the Mode Control Lever is set in one of these positions, ○ or ↻ a flow of outside air will not occur.

ADJUSTABLE LOUVRE OUTLETS

The four outlets have fully adjustable vertical and horizontal directional louvres. These outlets can be used to direct air into the passenger compartment.

INTERIOR HEAT DISSIPATION

When the vehicle has been left under conditions where a high degree of "heat soak" has taken place, i.e. parked with all windows closed in the sun during warm to high temperature periods, place the Mode Control Lever in the ↩ position, select IIII on the fan control and allow outside air to circulate through open windows while driving; this will assist in cooling down the interior of the vehicle.
After several minutes, close the windows again, place the Mode Control Lever in the ↻ position and use a high fan speed.

DISPERSION OF ODOURS, SMOKE, ETC.

Use any Mode Control Lever position except ○ or ↻ to obtain an exchange of air. Select ↻ if desired, after sufficient air has been exchanged, choosing a fan speed as desired.

AVOIDANCE OF FUMES

To avoid abnoxious fumes from being drawn into the vehicle the mode lever should be placed in the position ↻ while in stationary traffic.

HIGH HUMIDITY AND GLASS FOGGING

Where conditions of high moisture content in the air exist, the use of a high fan speed and ↻ Mode Control Lever position will quickly assist in extracting moisture from the air. This combination should also be used for several minutes to avoid fogging of glass areas, particularly the windshield, before selecting ↩ which gives air from outside.

CAUTION: Where air conditioning and automatic transmission are fitted to a vehicle, sufficient brake pressure should be maintained when the vehicle is stationary and the engine is idling, in order to prevent creep, that is, forward movement of the vehicle, when a drive gear is selected.

OTHER CONTROLS AND FEATURES

The fitment of the following equipment described is subject to the model or option selected and therefore all items may not be fitted to each vehicle.

SUPERLIFT SHOCK ABSORBERS (Where Fitted)

These allow direct control of vehicle level, so that when a vehicle is loaded or towing a caravan or trailer, the loaded height can be re-adjusted to give improved vehicle attitude. Also, they maintain a better headlamp high beam level. Superlift shock absorbers use compressed air and can be inflated or deflated through an air valve, similar to any standard tyre.

AIR PRESSURE VALVE LOCATION

Inside the luggage compartment at the right hand upper area and to the rear of the wheel housing.

AIR PRESSURE RECOMMENDATIONS

1. Never allow the pressure to fall below 70 kPa as this will result in damage to the shock absorbers.
2. Maximum permissible pressure when the vehicle is fully loaded is 620 kPa.
3. Maximum permissible pressure when the vehicle is unloaded is 210 kPa.
4. The shock absorbers should be inflated when the vehicle is standing on a level surface and only until:
   (a) The vehicle trim attitude is level or the maximum permissible pressure is reached.
   (b) Satisfactory ride characteristics are obtained based on previous usage, but not exceeding the above limits.

REMOTE CONTROL LUGGAGE COMPARTMENT LOCK (Caprice Only)

The operation of this feature is by a bright finished button, located at the far right hand of the instrument panel, under the engine hood release knob.

To unlock the luggage compartment lid, hold the button in, while the engine is running, until the lid is released.

A delay of approximately 3 to 5 seconds will occur before the lid will spring open.

The operation of the luggage compartment lock by the key is the same as outlined on Page 7.

"LIMITED SLIP" DIFFERENTIAL

Where this differential is fitted, it can be identified by a metal tag retained by the axle filler plug. The label calls attention to the need for special oil in this type of axle which must comply with the **GM 9985035 Specification.**

Use of unsuitable oil could result in noisy operation and/or excessive wear.

The "Limited Slip" Differential directs the major driving force to the rear wheel having the greater amount of traction, but it will not interfere with the normal differential action.

When the rear wheels are under extremely unbalanced tractive conditions (such as when one wheel is on a dry road surface and the other is on ice or mud) wheel spin can occur if over-acceleration is attempted. This condition may also be experienced if the driver over-accelerates on a wet road where a sharp bend must be negotiated.

It is important that there be no excessive rear tyre differences. One indication of this condition is swerving on acceleration. If this is encountered, check the rear wheels for different tyre size, air pressures or excessively different wear and tread patterns.

CAUTION: Never run the engine with a gear engaged and one wheel raised if the vehicle is fitted with a "Limited Slip" differential. The driving force directed to the wheel on the ground will cause the vehicle to move.

SECTION—3 **IN CASE OF EMERGENCY**

EMERGENCY STARTING

PUSH STARTING

If for any reason the starter motor is inoperative, it is **not possible** with an automatic transmission to select a range for starting the engine by pushing the vehicle.

If the fault is a flat battery, the engine can be started with the aid of a booster battery. (Refer Jump Starting.)

JUMP STARTING (USING A BOOSTER BATTERY)

The following procedure is for use **only** under the following conditions. Departures from these conditions and procedures, could result in: (1) serious personal injury (particularly to eyes) or property damage from such things as battery explosion, battery acid or electrical burns, or (2) damage to electronic components in either vehicle. If all the conditions cannot be met, or if you are uncertain about them, we strongly recommend for your safety and that of your vehicle that you leave the starting to a competent mechanic.

The battery in the other vehicle (booster battery) must be of the **same nominal voltage,** 12 volts, and must be negatively grounded. The nominal voltage and grounding of the other vehicle's battery may be determined by checking the specifications in its owner's manual. Use of a booster battery of a higher nominal voltage, or which is positively grounded may result in serious personal injury or property damage.

CAUTION: Never expose a battery to open flame or electric spark — battery action generates hydrogen gas which is flammable and explosive. Don't allow battery fluid to contact eyes, skin, fabrics, or painted surfaces. The fluid is a sulphuric acid solution which could cause serious personal injury or property damage. Flush any contacted area immediately with water. Wear eye protection such as industrial safety spectacles or goggles when working on or near battery. Remove rings, metal watch bands and other metal jewellery before jump starting or working around a battery.

Be careful in using metal tools and equipment. If such metal should contact the positive battery terminal (or metal in contact with it) and any other metal on the vehicle a short circuit may occur which could cause personal injury. Batteries and battery acid should always be kept out of reach of children.

TO JUMP START

1. Position the two vehicles so they are **not** touching and set the parking brakes. Place the automatic transmission in PARK in each vehicle. Also turn off lights, heater and all other unnecessary electrical loads.

2. Remove vent caps* (or covers) from both the booster and the discharged batteries. Lay a cloth over the open vent wells of each battery. These two actions help reduce the explosion hazard always present in either battery when connecting live booster batteries to dead batteries.

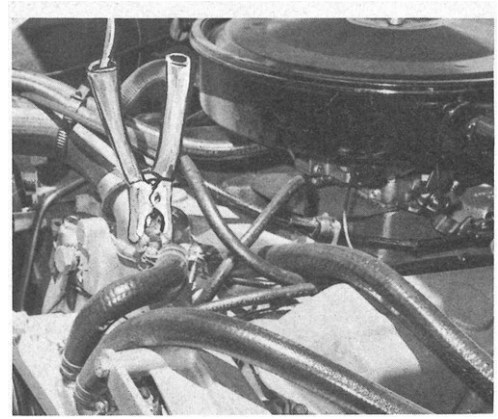
3. Attach one end of one jumper cable to the positive terminal of the **booster battery** (identified by red color, + or P on the battery case, post or clamp) and the other end of the same cable to the positive terminal of the **discharged battery.**

4. Attach one end of the remaining negative cable to the negative terminal (black color, — or N) of the **booster battery**, and the other end to your vehicle according to the illustrations opposite **(do not connect directly to negative post of dead battery)** taking care that the clamps from one cable do not inadvertently touch the clamps on the other cable. Do not lean over the battery when making this connection.

5. Start the engine in the vehicle that is providing the jump start (if it was not running). Let it run a few minutes, then start the engine in the vehicle with the discharged battery.

6. Reverse the above sequence exactly when removing the jumper cables. Reinstall the vent caps and dispose in a safe manner, any cloths used to cover the vent wells (or covers), as the cloths may have corrosive acid on them.

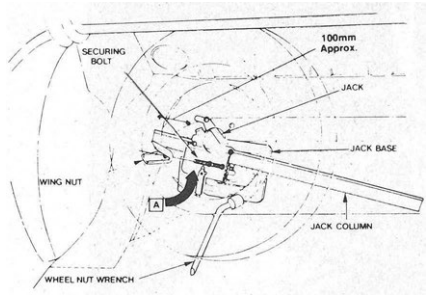
*Some batteries do not have vent caps.

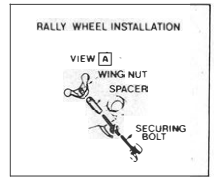


8 Cylinder Engines

The final earth connection is onto the thermostat housing retaining bolt at the top of the engine.

SPARE WHEEL STOWAGE





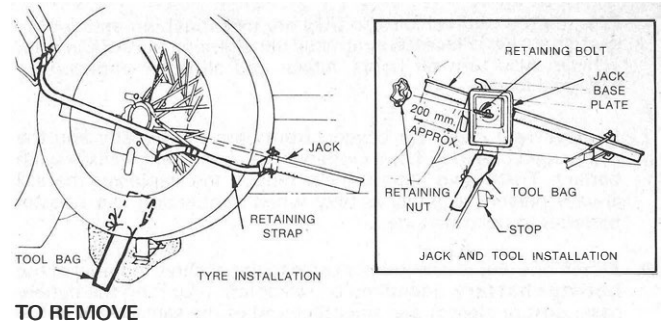
TO REMOVE

1. Unscrew the wing nut and remove.
2. Lift the spare wheel off the securing bolt and remove the jack, jack base plate and wheel nut wrench.

TO REPLACE

1. Place the jack base plate over the securing bolt with the top facing up
2. With the release lever in the Down position locate the jack housing along the column to obtain the dimension as shown in the illustration, then switch the release lever to the Up position. Install the jack over the retaining bolt using the hole in the jack housing.
3. Place the wheel nut wrench as shown in the illustration and as far forward as possible.
4. Place the wheel with the valve stem facing out over the securing bolt using the lowest bolt hole and push it forward until it is located at right angles to the securing bolt.
5. Screw on the wing nut and tighten until a secure installation is obtained.

WIRE WHEEL



TO REMOVE

1. Release the retaining strap.
2. Remove the spare wheel.
3. Remove the jack, jack base plate and tool bag.

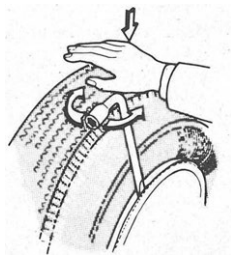
TO REPLACE

1. With the release lever in the DOWN position slide the jack housing along to within 200 mm of the top end of the column, then switch the release lever to the UP position.
2. Install the jack over the retaining bolt using the hole in the jack housing.
3. Place the jack base plate over the retaining bolt as shown in the inset.
4. Slip the end of the rubber retaining strap over the jack column, screw on the retaining nut and tighten to obtain a secure installation.
5. Place the tool bag as shown.
6. Position the spare wheel against the STOP and as far to the left as possible.
7. Thread the retaining strap through the retaining strap buckle and tighten securely.

WHEEL TRIM REMOVAL

DE VILLE

TO REMOVE (Refer Fig. A)



Insert the blade end of the wheel nut wrench between the outer edge of the wheel cover and the wheel rim. With light blows, using the palm of the hand and directed towards the wheel **centre,** force the blade in for half the length of the blade (wedge) section.

Pry away the wheel cover from the wheel rim by twisting the wrench as shown, while also operating the wrench to lever the cover away, using the wheel rim as a levering point. Repeat this operation at several points around the cover until fully removed.

TO REPLACE

Position the cover so that the valve hole in the cover is directly over the valve. While pressing the cover firmly against the wheel at a position below the valve, knock the cover onto the wheel with several light blows using the palm of the hand. Repeat this operation at several positions around the edge of the cover until a secure installation is obtained.

CAUTION: It may be necessary to protect the hand during this operation. If difficulty is experienced in replacing a wheel cover, defer replacement until the assistance of a service station is available.

POLYCAST WHEELS (Where Fitted)

Where Polycast wheels are fitted the trim ring removal and replacement is the same as for De Ville wheel covers except that all levering should be performed directly over the retaining clips.

CAPRICE

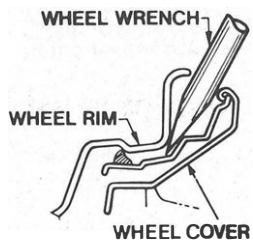
TO REMOVE

There are two stages in the removal procedure:

1st Stage — Fig. A

Insert the blade end of the wheel nut wrench between the outer edge of the wheel cover and the wheel rim. With light blows, using the palm of the hand and directed towards the wheel **centre,** force the blade in for half the length of the blade (wedge) section.

Pry away the wheel cover from the wheel rim by twisting the wrench as shown, while also operating the wrench to lever the cover away, using the wheel rim as a levering point.



2nd Stage — Fig. B

After sufficient clearance is obtained, relocate the blade of the wrench between the wheel cover and the wheel rim as shown.

Pry away the wheel cover by twisting the wrench, as in 1st stage, while also operating the wrench to lever the cover away, using the wheel rim as a levering point. Repeat stages 1 and 2 at several points around the cover until fully removed.

TO REPLACE

Position the cover so that the valve hole in the cover is directly over the valve. While pressing the cover firmly against the wheel at a position below the valve, knock the cover onto the wheel with several light blows using the palm of the hand. Repeat this operation at several positions around the edge of the cover until a secure installation is obtained.

CAUTION: It may be necessary to protect the hand during this operation. If difficulty is experienced in replacing a wheel cover, defer replacement until the assistance of a service station is available.

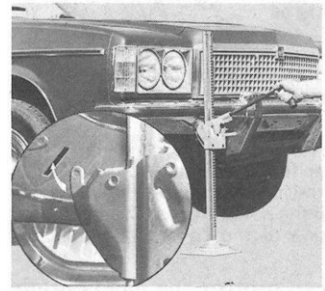
WHEEL CHANGING

BUMPER BAR JACK

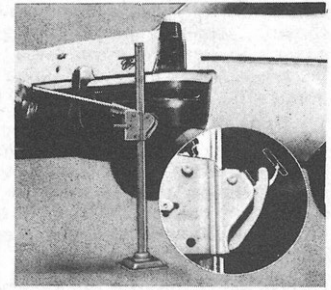
CAUTIONS: Carefully follow jacking instructions in order to reduce the possibility of serious personal injury. The jack is designed for use ONLY when changing wheels. Never get beneath the vehicle when supported by the jack only. Do not start or run the engine while the vehicle is on the jack only. While the vehicle is on the jack excessive passenger movement or releasing of the parking brake could cause the vehicle to move off its jacked position. Therefore, wherever practicable it is best to disembark the passengers during the jacking operation.

PROCEDURE

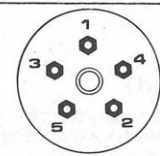
1. Park on the most level surface available and set the parking brake firmly.
2. Set the transmission shift lever in PARK.
3. Remove the tools and spare wheel (Refer previous instructions).
4. Block the wheel diagonally opposite the jacking position.
5. Remove the wheel trim (refer previous instructions). Using the wheel nut wrench slightly loosen the wheel nuts, but do not remove them.
6. Place the jack in the jack base plate and position the jack according to the illustration opposite.
7. Operate the jack with the release lever in the UP position, using a smooth, slow motion to raise the vehicle so that the tyre just clears the ground.
8. Remove the wheel nuts and avoid losing them or getting dirt in the threads. Remove the wheel and change it over with the spare.
9. Tighten the wheel nuts finger tight and then partially tight using the wrench.
10. With the release lever in the DOWN position lower the vehicle until the wheel touches the ground and is held from rotating. Fully tighten the wheel nuts using the sequence illustrated. A load of approximately 25 kg on the end of the wheel wrench, is adequate.
11. Completely lower the vehicle and remove the jack.
12. Replace the wheel trim and stow the tools and changed wheel according to the previous instructions.



Front Jacking Position



Rear Jacking Position



WHEEL NUT TIGHTENING SEQUENCE

CAUTION: As soon as practicable, after a wheel change, the wheel nut torques should be checked at a GMH Dealership, or by a competent person, to ensure correct tightness. Refer Page 73 for wheel nut torque specification.

OVERHEATING

If, while the engine is operating, the temperature gauge needle moves towards the red area, particularly during high load pulling, bring the vehicle to a stop at the side of the road and allow the engine to idle for approximately 2 minutes only, to cool down, after which it should be turned off and the engine hood left open.
While the engine is cooling check whether the fan belt is slipping or broken and check all radiator hoses for leakage and damage, using care in case hot fluid is spurted out. When the engine is cool check the radiator coolant level according to the following instructions.

CAUTION: DO NOT remove the radiator cap while the engine is still hot because the cooling system will blow out scalding fluid and steam under pressure which is likely to cause serious personal injury and loss of coolant. Therefore, the coolant level should be checked only when the engine has cooled down.

TO REMOVE THE CAP WHEN THE ENGINE IS COOL:

1. Slowly rotate cap counterclockwise to detent. Do not press down while rotating.
2. Wait until any residual pressure is relieved — as indicated by a hissing sound.
3. After any hissing ceases, press down on the cap while continuing to rotate counterclockwise. Remove the cap, check the coolant level, and add water if necessary.

IMPORTANT: Never pour cold water into the radiator when the coolant is extremely low and the engine hot. Wait until the engine has cooled down, then run the engine at idle speed while slowly adding water.
If anything is found to be faulty **do not** run the engine until the cooling system has been checked and the fault rectified by the nearest Service Station, or preferably a GMH Dealer.

If no fault is found, switch the ignition to the ON position and if the warning light does not come on it indicates that the engine has cooled sufficiently to proceed carefully. Start the engine and continue driving, keeping a constant watch on the indicator light (or temperature gauge).

If the overheating condition occurs again stop the vehicle according to the previous instructions and arrange for a GMH Dealer or Service Station to check the cooling system. However if there is no indication that the overheating condition will occur again it is safe to proceed but it is recommended that the cooling system be thoroughly checked by a GMH Dealer at the first convenient opportunity.

NOTE: Radiator pressure caps should be checked annually by your Servicing Dealer for proper operation and replaced as required with the applicable AC type.

FREEING THE VEHICLE FROM SAND ETC.

If it becomes necessary to rock the vehicle to free it from sand, mud or snow move the selector lever from D to R in a repeat pattern while simultaneously applying light pressure to the accelerator.

CAUTION: Do not spin the driving wheels in excess of 60 km/h as indicated on the speedometer. Personal injury and severe damage may result from excessive wheel spinning including tyre disintegration or rear axle failure.

TOWING A DISABLED VEHICLE

CAUTION: If proper precautions are not taken the towing of a vehicle can be a hazardous operation. It is preferable under all circumstances to have the towing performed by an experienced tow truck operator with equipment which is specially designed for the purpose.

All state laws concerning towing must be followed.
When towing a vehicle follow the towing equipment manufacturer's instructions. Use of a safety chain which is completely independent of the main towing attachment is essential for tow truck operation and strongly recommended when the vehicle is towed using a tow rope. When towing with the rear wheels on the ground the transmission should be in NEUTRAL and the parking brake released. Vehicles with defective transmissions should not be towed unless the propeller shaft is removed.
However, where the propeller shaft remains connected the vehicle must not be towed at speeds in excess of 55 km/h or distances in excess of 55 kilometres.

CAUTIONS:

1. **Never have the vehicle towed on four wheels with the ignition switch in the LOCK or ACC position.**
2. **As power brakes and power steering are fitted never have a vehicle towed on four wheels without a solid connection between the disabled vehicle and the towing vehicle, unless the engine is running.**
3. **Never tow a vehicle at speeds over 80 km/h.**
4. **Any loose or protruding parts of the damaged vehicle such as doors, hood, fenders, trims, etc. should be secured prior to moving the vehicle.**
5. **Points of attachment of the disabled vehicle should be inspected for damage or deterioration. If an attachment point appears damaged or deteriorated another point at a substantial structural member should be selected.**
6. **Never allow any passengers to ride in a towed vehicle.**

1. TOWING BY TOW TRUCK

The vehicle should be raised until the lifted wheels are a minimum of 10 cm from the ground, care should be taken to ensure adequate ground clearance at the opposite end of the vehicle.

Front Attachment — The preferred attachment is to use hooks at the front inboard ends of the lower control arms where the arms attach to the front suspension crossmember with safety chains attached to the outboard ends of the lower control arms. Care must be taken that the hooks and chains are well clear of all steering linkages. A suitable protective cross bar should be positioned across the vehicle under the radiator support sheet metal to protect lights, bumpers and painted surfaces.

Rear Attachment — In cases of rear end damage it may be necessary to lift the rear end of the vehicle and tow on the front wheels only. In such cases the steering wheel must be clamped in the straight ahead position using a clamping device designed for towing service use, such as those provided by towing equipment manufacturers. Do not use the vehicle's steering column lock for this purpose. Hooks and safety chains should be attached to the rear axle tubes and a suitable wooden cross bar with spacer blocks positioned across the vehicle resting on the underbody side members (not the fuel tank) to keep the towing equipment clear of the bumpers and painted surfaces.

2. TOWING BY A TOW ROPE TYPE ATTACHMENT

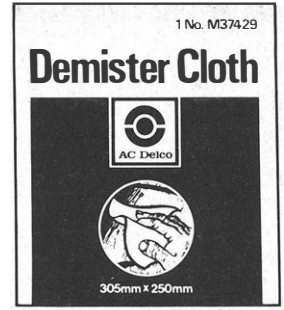
The tow rope and safety chains should be attached to the front suspension crossmember in a position well away from all steering linkages. This is necessary to avoid restricting steering movement of the towed vehicle. It may be necessary to use a wooden crossbar under the radiator mounting to protect sheet metal panels from damage by the tow rope.

SECTION—4 **APPEARANCE CARE**

AC Delco QUALITY CAR CARE PRODUCTS

AC Delco Quality Car Care Products available through an authorized GMH Dealer for vehicle cleaning operations include —

POLISHING CREAM	POLISHING LIQUID
DEGREASER	UPHOLSTERY CLEANER AND DEODORANT
SYNTHETIC CHAMOIS	DEMISTER CLOTH
WASH & WAX	OPTIKLEEN



PAINT AND APPEARANCE ITEMS

Imperfections in paint, trim or other appearance items would normally be apparent and corrected during New Vehicle Pre-delivery conditioning. Therefore, we suggest that if you find any paint or appearance imperfections, call it to the attention of your Dealer without undue delay as normal deterioration due to use and exposure is not covered by the New Vehicle Warranty.

VEHICLE CLEANING

A job always becomes easier when it is tackled in a systematic way, and vehicle cleaning is no exception. We suggest that if you set about the task of washing and polishing your vehicle in the following sequence the best results will be achieved:—

1. Brush out and clean the interior.
2. Carry out preliminary steps to washing.
3. Wash the exterior.
4. Polish the exterior and finish off.

Ask your GMH Dealer for the recommended range of AC Delco Car Care Products.

CAUTION: Many cleaners may be toxic or flammable, or may cause damage to the interior. When cleaning the interior, do not use volatile cleaning solvents such as: acetone, lacquer thinners, enamel reducers, nail polish removers; or such cleaning materials as laundry soaps, bleaches or reducing agents. Never use carbon tetra-chloride, gasoline or naphtha for any cleaning purpose.
IMPORTANT: Be sure the vehicle is well ventilated while using any cleaning agents. Follow the manufacturer's recommendations when using such products.

CLEANING OF INTERIOR

CARE AND CLEANING OF UPHOLSTERY

Dust and dirt particles which accumulate on the surface of the interior trim should be removed every few weeks — more often with constant hard driving. This can be done readily with a vacuum cleaner. Before attempting to remove spots and stains from an upholstery fabric, it is necessary to determine as accurately as possible:

1. The type of fabric,
2. The nature and age of the stain,
3. The effect of the stain removal agent upon the colour, structure and general appearance of the trim material.

It is essential that stains be removed from the trim material as soon as possible after they have been made. If they are allowed to remain on the fabric for any length of time they very often become oxidised or set, and removal becomes difficult, if not impossible.

CLEANING P.V.C. COATED FABRICS

Vinyl (P.V.C.) coated fabrics are used for seating, head-lining and auxiliary trimming. The grades used vary according to their function. P.V.C. fabrics are generally made with fabric bases upon which synthetic resins are applied. Care of P.V.C. fabrics is a relatively simple but important matter. The surface should be wiped over with a dry cloth during the regular cleaning of the vehicle. Should dirt accumulate and become embedded in the material pattern the following procedure is recommended:

1. Using lukewarm water and soap, work up thick suds on a piece of cheesecloth, and apply to the surface. A soft bristled brush can be used to advantage to remove stubborn stains or dirt embedded in the grain of the material.

2. The operation should be repeated using only a damp cloth and no soap.
3. The trim should then be wiped dry with a soft cloth.

The above cleaning instructions also apply to the rubber floor mats.

IMPORTANT: Where stubborn stains on P.V.C. fail to respond to the above methods, a light application of AC Delco Upholstery Cleaner and Deodorant (Part Number M37222) with a soft cloth will invariably prove satisfactory.

Do not use cleaner excessively.

CLEANING LEATHER TRIM MATERIAL

Requirements for cleaning leather are similar to P.V.C. coated fabrics. The leather has a protective surface and coating which puts it in the same category as the P.V.C. material cleaning procedure for leather trim; follow the recommendations outlined in the previous section.

CLEANING CLOTH TRIM MATERIAL

Where the seats in your vehicle are upholstered with cloth, the following instructions should be observed.

Most loose dirt and dust can be removed by a vacuum cleaner or a soft brush. **Do Not Use a Whisk Broom or a Coarse Hair Brush.** If normal soiling should take place, it is recommended that the fabric be sponged lightly with warm water containing a detergent and a small amount of ammonia. The fabric should then be rubbed lightly, and if necessary, sponged again to remove anything stubborn. Soak up excess fluid with dry cloth. AC Delco Upholstery Cleaner may be used to advantage, but should be used sparingly.

CLEANING CARPETS

Thoroughly brush or vacuum the carpet. In many instances the carpet may require no further cleaning. If the carpet is extremely soiled, thoroughly vacuum it to remove loose dirt; then using AC Delco Car Care Upholstery Cleaner, clean approximately one square foot at a time. After each area is cleaned, remove as much of the cleaner as possible with a vacuum cleaner. After cleaning the carpet, use an air hose to fluff the carpet pile, then dry the carpet. After the carpet is completely dried, use an air hose to again fluff the carpet pile.

CLEANING WOOD GRAINED INSERTS

Wood grained finish should be wiped over with a dry cloth during general cleaning of the vehicle. If further cleaning is necessary, lukewarm water and soap may be used. Dry the area thoroughly with a soft dry cloth.

CLEANING SEAT BELTS

Cleaning of the seat belts can be carried out by using a mild non-abrasive soap and lukewarm water. After washing be sure to thoroughly sponge the washing solution out of the belts.

CAUTION: Do not bleach or dye belts since this may severely weaken them.

CLEANING ASH TRAYS

DRAWER TYPE

To remove slide out the tray, depress the spring loaded tab in the centre and carefully withdraw. The tray can then be emptied and cleaned. To replace reverse this procedure.

INSERT TYPE

To remove, open the lid of the ash tray and use the lid to pull out the ash tray complete. The tray can then be emptied and cleaned. To replace, reverse the procedure.

CLEANING OF EXTERIOR

PRELIMINARY STEPS

CAUTION: Care should be used when moving the vehicle after washing, in case water has affected the brakes.

Frequent hosing and washing of the vehicle cannot be over-stressed as the most effective precaution against corrosion. Other items requiring attention before washing the vehicle are as follows:—

1. UNDERBODY CLEANING

The effects of salts and other corrosive materials from road surfaces can result in accelerated rusting and deterioration of underbody components such as brake and fuel lines, frame, underbody·floor pan, exhaust system, brackets, parking brake cables. These corrosive effects, however, can be reduced by periodic hosing of the underbody with plain water whenever the vehicle is being washed. In geographic areas having a heavy concentration of corrosive materials it is recommended that the complete underbody be inspected and washed at least once each year, preferably after a winter's exposure. Particular attention should be given to cleaning out underbody members where dirt and other foreign materials may have collected.

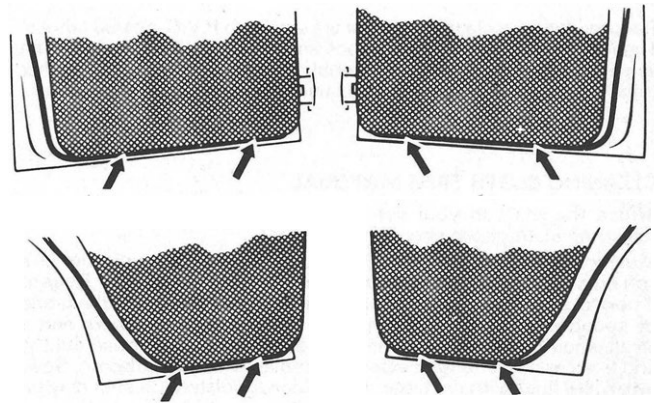
2. CLEANING VINYL TOP WHERE FITTED

The top should be washed frequently with neutral soap suds, luke-warm water and a brush with soft bristles. After the entire top has been cleaned, rinse with clear water to remove all traces of soap.

IMPORTANT: Do not use volatile cleaners or household bleaching agents on the vinyl top material.

3. DOOR DRAIN HOLES

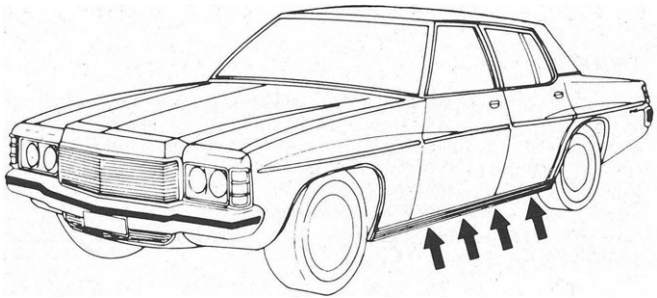
It is important that the drain holes at the bottom of the door panels are checked to make sure that they are free of dirt and foreign matter, which could trap water inside the panels. Clogged drain holes can be cleaned with a small screwdriver and these drain holes are angled back towards the rear of the vehicle. (Refer illustration below.)



4. ROCKER SILL VENTS

In all model bodies there are vents which should be regularly checked to see that they are clear of blockage, using a blunt ended instrument.

These vents are formed as cut-outs in the sheet metal along the bottom edge of the rocker sill, being evenly placed between the front and rear wheel arches and face inward, towards the centre of the vehicle. (Refer illustration below.)



5. GLASS

Special care should be taken to avoid scratching the glass when it is being cleaned. If it is cleaned at the same time as the rest of the vehicle, there is a possibility that particles of grit will cause fine scratches. An accumulation of these on the windshield can make night driving very unpleasant. Flush off any heavy mud deposits on the glass when washing the body, but leave the final cleaning and polishing until afterwards.

Each section of glass should then be washed in turn, making sure that the water, its container and the sponge are quite clean and free from grit. If the glass is very dirty, a little household ammonia mixed with warm water will help. Clean old linen cloth is better than new material for polishing glass.

INSECT SPOTS

Insect spots on the paint finished parts of the vehicle can be easily washed off by using a solution containing 2 litres of water in which approx. 220 grams of baking soda (Bicarbonate of Soda) has been dissolved. Flush the washed parts with clean water. After washing and drying, park the vehicle in a shaded area.

WASHING

The acrylic lacquer finish on your vehicle is superior to ordinary lacquers and will stay bright and new looking for years with little or no polishing, provided it is given a reasonable amount of regular washing to keep off road grime.

To preserve the original paint finish of the vehicle, it is essential that it is kept clean by frequent washing. Washing not only removes dirt and road grime that settles on the vehicle, but also dilutes acids which accompany such grime, in particular, salt from air or sea spray encountered in coastal areas which often become trapped in crevices. Tree sap, road tar, excretion from insects and industrial fall out often contain harmful chemicals and other foreign matter that may permanently damage the paint finish of the vehicle. These should be removed without delay, using an effective removal agent.

REGULAR WASHING

If the vehicle is in continuous use, it should be washed at least once a week with either cold or warm water (preferably running water), using clean chamois leathers, sponges or rags free from dirt or grit likely to scratch the paint finish. It is good practice to first hose the vehicle to remove as much of the grit and grime as possible before swabbing the surface. Do not wash the vehicle under bright sunlight when high temperatures are being experienced, as this will result in a streaky, watermarked finish.

AC Delco Wash and Wax (Part Number M37226) loosens road grime to make washing easier and leaves paint shining clean.

IMPORTANT: If petrol is spilt on the paint finish when refilling, owners are advised to ensure that it is flushed off with clean water immediately. The reason is that petrols currently in use have a tendency to stain or soften new paint finish during the weathering out period, particularly when the vehicle is exposed to high temperatures.

NOTES: 1. Calcium chloride and other salts, road oil and tar, tree sap, chemicals from factory chimneys and other foreign matter may damage any known automobile finish if allowed to remain in contact with the paint film.

2. Some chemical cleaners used for removing road oils and tars from painted surfaces have been found to be detrimental to acrylic finishes. When purchasing a cleaner, polish or wax, ensure that it can be safely used on an acrylic finish.

3. Grease and oil, and even tar if it's fresh, can be removed from the finish with a little Kerosene or White Spirits. As a precaution against staining, wash and polish as soon as possible the area from which the foreign matter has been removed.

TYRES

Sponging with cold water is all that is necessary for normal cleaning of the tyres. Oil and grease can, and should, be removed with soap and water or detergent. For tar or other substances, a mild abrasive, such as mechanics' hand soap or kitchen cleaning powder, may be used if necessary. Thoroughly wash the tyres with water to finish. Petrol must not be used for cleaning tyres.

New Tyre look can be restored by using Tyre Black supplied in an easy-to-use applicator.

CARE OF COLOURED SIDE WALL TYRES

Road grime and kerb marks may easily be removed by use of a mild soap, or detergent, warm water and a stiff brush. Do not use petrol, kerosene or any oil products that will discolour the side walls and deteriorate the rubber. Thoroughly rinse with water to remove cleanser.

POLISHING

Even though the acrylic lacquer finish on your vehicle is more durable than ordinary lacquers, under certain conditions you may wish to polish your vehicle to provide maximum protection against road dirt and industrial fall out etc. Also, the application of a polish may be required to remove foreign matter which is not normally removed from vehicles by washing. Over a period of time, such foreign matter may build up on the paint surface to the detriment of its overall appearance.

Do not attempt to apply a polish without first washing to remove existing loose grit, surface dirt, dust or grease, etc. Either AC Delco Polishing Liquid (Par No. M37221) or AC Delco Polishing Cream (Part No. M37220) will quickly and easily impart a deep, rich shine when used as directed on the container.

CHROMIUM PLATED PARTS

Generally, a rub with a clean soft cloth will be all that is necessary to remove dust from the chromium plated parts. However, if the chromium is covered with dead insects or mud, it should be washed with warm soapy water and then cleaned with AC Delco Polishing Liquid (Part Number M37221). This polish should also be used if the chromium shows signs of tarnishing. Do not use ordinary metal polishes as they may contain abrasives which would ruin the plating.

ALUMINIUM BODY SIDE MOULDING

These mouldings which are fitted to your vehicle should not be confused with stainless steel mouldings and should not be cleaned with metal polish, as the polish may contain abrasives which will damage the protective finish.

PAINT WORK INSPECTION

Regular inspection of the vehicle should be made for scratch marks, cracks or damaged areas, all of which could develop rust and thus affect paint finish. Any deep scratches, cracks or breakdown in the finish should be repaired without delay. Care should be taken to ensure that any rusting is counteracted immediately, otherwise rust 'creep' will extend beyond the damaged area. This applies particularly in sub-tropical areas or coastal districts, where the moist or salt-laden atmosphere accelerates rusting if it is allowed to develop through neglect. The paint finish of the vehicle gives a very high degree of protection against the weather, but it should be realised that wear and deterioration occur when the vehicle is exposed to elements for prolonged periods.
The vehicle therefore should be garaged whenever possible.

GENUINE GM REPLACEMENT PARTS AND ACCESSORIES

GM Parts and Accessories Division of General Motors-Holden's Ltd. is established to distribute Genuine GM Parts through Authorized GMH Dealers located throughout the Commonwealth from whom you can obtain new parts as required.
Genuine GM Parts are manufactured to the high standards of quality established for General Motors-Holden's vehicles — to the correct specifications and of the same materials as the original parts on your vehicle. They are, therefore, guaranteed, and it is definitely to your interest to specify them.

SECTION—5 **SERVICE AND MAINTENANCE**

ENGINE

CAUTION: As with any machinery, extreme care should be taken when performing any inspection, maintenance, or repairs so as to prevent accidental injury. Improper or incomplete servicing could also result in vehicle operational problems which may lead to serious personal injury, or damage to the vehicle. Should your have any doubts about performing any operation, have it performed by a qualified workshop such as a GMH Dealer.

FUEL REQUIREMENTS

The vehicle is designed to operate on a good quality clean fuel. The major Australian Oil Companies produce their petrol according to the following ratings.
Regular (Std.) Grade: 89 Petrol Research Octane Rating
Premium (Super) Grade: 98 Petrol Research Octane Rating
(Refer to page 74 for the correct engine octane rating.)
Use of a fuel which is too low in anti-knock property will result in "pre-ignition" (a metallic rapping noise generated during the combustion process). If pre-ignition persists, consult an authorized GMH Dealer. Continued operation of an engine which exhibits symptoms of pre-ignition, may result in damage for which General Motors-Holden's is not responsible under the terms of the Warranty.

INITIAL OIL FILL

A high quality SE oil was installed in your engine at the factory. It is not necessary to change this factory-installed oil proir to the recommended normal change period. However, check the oil level more frequently during the running-in period since higher oil consumption is normal until the piston rings become seated.

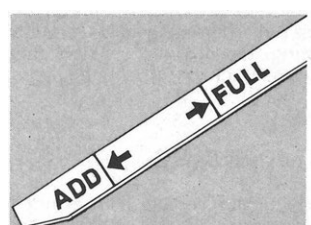
NOTE: Non-detergent and other low quality oils are specifically not recommended. Only the use of SE engine oils and proper oil and filter change intervals assure you of continued proper lubrication of the engine.

MAINTAINING OIL LEVEL

The oil level indicator is marked ADD and FULL. The oil level should be maintained between the two markings, neither going above the FULL marking nor under the ADD marking. Check the oil level frequently and add oil when necessary.

To check the oil level accurately, the vehicle must first be on level ground and the engine should be stopped for at least ten minutes. Checking the oil level too soon after stopping the engine will not allow sufficient time for oil, which has circulated to the upper parts of the engine, to drain back into the engine oil pan, and consequently, a false low reading will be obtained. Topping up under these conditions will result in the oil pan being over-filled.

Remove the indicator, wipe it clean with cloth or paper before reinserting it firmly. Pause for a second then withdraw the indicator to check the reading of the oil level.



Oil Indicator Level

The distance between the ADD and FULL marks represents approximately 1 litre on all engines. Oil level should be checked more often during the running-in period since somewhat higher oil consumption could be experienced until piston rings become seated.

OIL CONSUMPTION

In many cases, it is erroneously thought that engines should not use any noticeable amount of oil between oil changes. In actual fact every internal combustion engine should use a certain amount of oil to act as a lubricating and cooling agent, especially during the running-in period.

There are several factors that contribute to oil consumption, apart from mechanical malfunction, that should be noted, and these are: the type of oil, the seating of piston rings, the oil level, and the conditions under which the vehicle is operated.

RUNNING-IN

The initial factory-fill oil should remain in the engine for the recommended period. (Refer this section.) Oil consumption may be high during the running-in period.

LUBRICATION

An engine is dependent on oil to lubricate the cylinder walls, pistons, rings and valve stems. A film of oil is left on the cylinder walls and burned on the next firing stroke, while the film on the valve stems is drawn into the combustion chamber and burned. These quantities, while small, explain why an engine does use some oil.

OIL LEVEL

Maintaining a proper oil level is also an important factor in controlling oil consumption. An overfull crankcase allows the reciprocating parts of an engine to splash oil on to the cylinder walls in quantities greater than the piston rings can control. This excess oil will be drawn into the combustion chambers and burned.

Overfilling the crankcase can result if the oil level indicator markings are not understood. (Refer to previous notes.)

DILUTION

Probably the most prevalent complaint of oil consumption comes from the motorist whose vehicle is driven at below normal operating temperatures for long periods of time. The oil becomes diluted by fuel and moisture which settle in the crankcase, raising the oil level and creating a false reading on the oil level indicator. For example, in a vehicle that has accumulated 1500 kilometres of city operation and has consumed a normal amount of oil, the level may not have dropped from the FULL mark, due to dilution. If this vehicle is then driven for some distance at highway speeds on a warm day, the dilution elements evaporate, lowering the oil level and the motorist assumes the oil is being lost.

SPEED CONSUMPTION

Sustained high engine speeds will increase oil consumption because higher speeds increase engine temperatures which lower oil viscosity and allow more oil to reach the combustion chamber.

If it is considered that the above possibilities can be accounted for but excessive oil consumption appears to continue, then it is recommended that you discuss the situation with a GMH Dealer.

NOTE: Non-detergent and other low quality oils are specifically not recommended. The use of break-in oils, tune-up compounds, friction-reducing compounds and other supplemental additives are not recommended; their use will only increase operating costs.

REMINDER: The use of proper engine oils and observing oil change intervals are your best assurance of continued reliability and performance from the engine of your vehicle.

In the event of an operational problem, consult your GMH Dealer for advice before using supplemental additives.

OIL FILTER REPLACEMENT

The full-flow oil filter, with non-return check valve, filters all the engine oil delivered by the oil pump. For this reason the interval of filter change is very important.

The oil filter should be replaced every six months or 10,000 kilometres whichever occurs first, independent of oil change intervals.

Under prolonged dusty driving conditions it is recommended that the oil filter be replaced more often.

NOTE: After the oil filter has been replaced, an additional 0.8 litres of oil must be added.

Always use AC brand of oil filters, for replacement purposes.

OIL CHANGE INTERVALS

(ONLY 'SE' GRADE OIL SHOULD BE USED.)

The engine oil change interval is dependent on the type of operation of the vehicle and on the climatic conditions in which it is operating. The chart given below indicates the change interval recommended for normal operating conditions.

NORMAL OPERATING CONDITIONS

Prevailing Daytime Temperature	Regular Oil Change Interval
ABOVE 10°C	EVERY 180 DAYS OR 10,000 km —WHICHEVER OCCURS FIRST.
BELOW 10°C	EVERY 30 DAYS OR 5000 km —WHICHEVER OCCURS FIRST.

ABNORMAL OPERATING CONDITIONS — EVERY 30 DAYS OR 5000 km

Under prolonged dusty conditions it is recommended that oil changes be made more often than shown in the table. Long runs at high speeds under high ambient temperatures with the resultant high engine operating temperatures, may oxidize the oil, forming sludge and varnish. While no definite drain intervals can be recommended under these conditions, they should be more frequent than under normal driving conditions.

However, owing to present day operating conditions, more vehicles are at the other extreme, that is, they are driven so that they seldom have the opportunity to attain and maintain efficient engine operating temperatures. This applies to city and suburban driving, where short distances are travelled. Under severe conditions such as these, sludge forms in the engine more readily, thus necessitating more frequent oil change intervals.

IT IS RECOMMENDED THAT YOU SEE YOUR GMH DEALER FOR ADVICE ON THE FREQUENCY OF OIL AND FILTER CHANGES UNDER UNUSUAL DRIVING CONDITIONS.

ENGINE OIL VISCOSITY GRADES

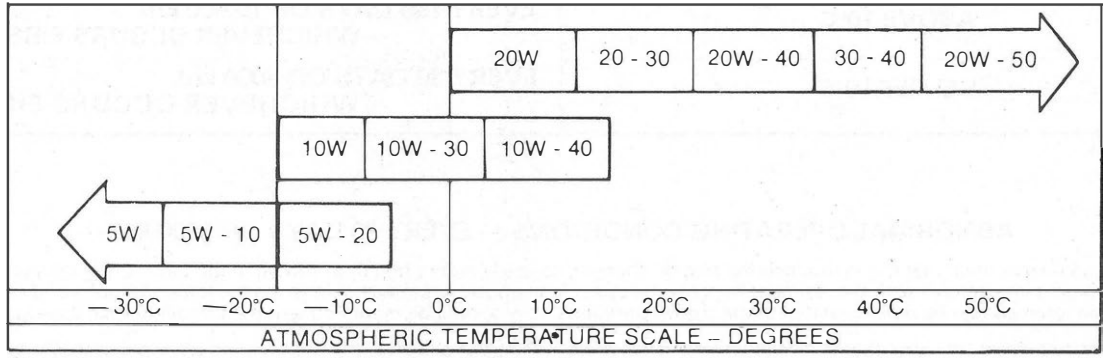
(ONLY 'SE' GRADE OIL SHOULD BE USED)

The grade of crankcase oil should be selected to give the best performance under the climatic and driving conditions in the territory in which the vehicle is driven. When the crankcase is drained and refilled, the crankcase oil should be selected, not on the basis of the existing temperature at the time of the change, but on the atmospheric temperature range anticipated for the period during which the oil will be used.

During warm or hot weather, an oil which will provide adequate lubrication under high operating temperatures is required.

During the colder months of the year, an oil which will permit easy starting at the lowest atmospheric temperature likely to be encountered, should be used.

The Chart below will serve as a guide in selecting the proper S.A.E. viscosity grade of oil.



NOTE: Use one of the following S.A.E. Grades for sustained high speed driving: 20-30; 20W-40; 30-40; 20W-50.

SEAT BELTS

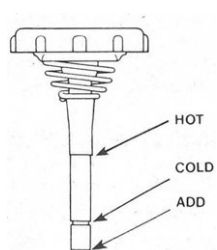
In the interest of safety seat belts should be checked regularly. Your Dealer will inspect and test the belts for you as part of the normal Guardian Maintenance Service. Never attempt to modify or change the seat belt away from the original specification as this will affect the operation of the belts and reduce their effectiveness, in preventing injury, in an accident.

POWER STEERING

At each oil change period the fluid level in the pump reservoir should be checked using the fluid level indicator which is attached to the filler cap. This operation can be carried out when the fluid is either cold or hot.

NOTE: When checking the fluid level the engine must be stopped with the front wheels in the straight ahead position. If the reading is taken before vehicle is operated (i.e. when the fluid is cold) the fluid level should be at the COLD mark on the indicator. If the reading is taken after the vehicle has been operated for at least 10 to 15 minutes (i.e. when the fluid is hot) the fluid level should be at the HOT mark on the indicator.

After checking the fluid level and it is found to be at or below the ADD mark on the indicator use DEXRON II automatic transmission fluid to raise the level to the appropriate mark as described above.



TRANSMISSION

FLUID RECOMMENDATION

Use automatic transmission fluids identified with the mark DEXRON®, available from your GMH Dealer.

Check the fluid level at each service. To make an accurate fluid level check:

1. Drive the vehicle several kilometres, making frequent starts and stops, to bring the transmission up to normal operating temperature approximately 80°-90°C.
2. Park the vehicle on a level surface.
3. Place the selector lever in 'Park' and leave the engine running.
4. Remove the dipstick and wipe it clean.
5. Reinsert the dipstick until the **cap seats.**
6. Remove the dipstick and note the reading.

If the fluid level is at or below the ADD mark, add sufficient fluid to raise the level to the FULL mark. .5 litres raises the level from ADD to FULL. **Do not overfill.**

Under normal driving conditions, the transmission fluid should be changed every 24 months or 40,000 kilometres. If your vehicle is driven extensively in heavy city traffic during hot weather, or is used to pull a trailer, change the fluid every 12 months or 20,000 kilometres. Likewise, operators of vehicles in commercial use such as taxicabs, hire vehicles or patrol vehicle services where the engine idles for long periods, should change fluid every 12 months or 20,000 kilometres.

SERVICING

As all adjustments, cleaning and servicing, of automatic transmissions requires specialised equipment and knowledge it is recommended that these operations be performed by an authorised GMH Dealer.

REAR AXLE

Every six months or 10,000 kilometres whichever occurs first, check the lubrication level and add oil if necessary to fill the rear axle to the level of the filler plug hole (refer to page 64 for recommended oil specification).

COOLING SYSTEM

The function of the cooling system is to keep the engine at its most efficient operating temperature under all driving conditions. Therefore care and proper servicing of the cooling system is essential to maintain its maximum efficiency.

IMPORTANT—CORROSION PROTECTION

For maximum corrosion protection of the cooling system it is essential that water of a high purity be used in conjunction with an approved corrosion inhibitor.

In many areas of Australia, particularly in areas of low rainfall where water with high mineral or chemical content is common, rain water or distilled water must be used for top-up and complete fill purposes.

Where other water, such as borewater, has been used in an emergency, immediately it is possible, drain and flush the cooling system and refill using clean water and the recommended corrosion inhibitor.

Ensure that the correct mixing instructions are observed when adding the corrosion inhibitor.

RADIATOR PRESSURE CAP

With the radiator pressure cap fitted, the cooling system can function at a temperature in excess of 100°C without boiling.

CAUTION: Therefore, if the cooling system is hot, the radiator cap must not be removed quickly — it should be rotated slowly to the first stop, which permits the pressure to release slowly through the overflow pipe. The cap must not be removed completely until all the pressure is released, consequently, it is advisable to cover the cap with a cloth as protection against steam. Unless this precaution is taken the coolant may boil when pressure is released and some of it be ejected from the filler neck of the radiator, causing injury to persons or damage to the vehicle finish.

Never pour cold water into the radiator when coolant is extremely low and the engine is hot. Such a sudden change in temperature may result in cracking the water jackets. It is advisable to allow the hot engine to cool to 10 to 15 minutes, then run the engine at idle speed while slowly adding water.

FILLING THE COOLING SYSTEM

Determine whether the cooling system includes or does not include a radiator overflow reservoir, then follow the appropriate filling instructions below.

SYSTEM WITHOUT RADIATOR OVERFLOW RESERVOIR

Running an engine with the coolant level low enough to cause boiling will result in engine damage. The coolant level should be checked when the engine is cold and then only enough water should be added to bring the level to approximately 2 cm below the bottom of the filler neck. This procedure must be followed as excess water containing inhibitor will be expelled during the warm-up period, due to expansion, which will deplete the concentration of inhibitor and thus promote corrosion.

SYSTEM WITH RADIATOR OVERFLOW RESERVOIR

With the engine cold fill the radiator until coolant enters the reservoir via the overflow outlet tube. Fit the radiator pressure cap and start the engine. During the warm-up period coolant will be expelled from the radiator into the reservoir due to expansion.

When the engine is at normal operating temperature check the coolant level in the reservoir and, if required, top up to the "Max. Level when hot" position shown on the reservoir. Subsequent topping-up of the reservoir, with the engine hot, will ensure that the radiator is always full without having to remove the radiator pressure cap.

DRAINING AND FLUSHING

6 months or 10,000 kilometres, drain and refill the cooling system and add inhibitor. (Refer Page 61.)

To completely drain the cooling system, carry out the following steps:

RADIATOR

Loosen the cap. Disconnect the lower radiator hose at the rear of the radiator after loosening the hose clamp.

ENGINE

Remove the hexagon head plugs midway along each side of cylinder block, above oil pan flange.

REMINDER: Replace and properly tighten all drain points before refilling.
Do not use cleaning chemicals to loosen scale unless the cooling system is afterwards thoroughly reverse flushed, otherwise loosened scale will clog the radiator water passages.
For complete removal of loose sediment and sludge from the radiator and water jacket, pressure flushing with an air and water gun is recommended, and as this method of flushing requires special equipment we suggest you have this work carried out by your GMH Dealer.

CAUTION: The radiator coolant contains a corrosion inhibitor or an anti-freeze, both of which are toxic. Should an emergency arise where drinking water is required, the radiator coolant must not be consumed under any circumstances.

NOTE: In addition, care should be taken to prevent the fluid coming in contact with clothing or the exterior finish of the vehicle as it could cause a stain. If any fluid is spilled, flush immediately with clear water.

CORROSION INHIBITOR

HN-1109 (Part No. 2822485)

It is recommended that 140 ml of engine coolant system corrosion inhibitor HN-1109 be added after regular draining.
This quantity is only applicable when water of a high purity is used.

MIXING INSTRUCTIONS

The recommended quantity, for the particular engine, should be added to a bucketful of water and stirred before pouring the water into the radiator. Then complete the filling of the cooling system with water. It is not recommended that water be added to a container, into which the inhibitor has first been poured.

COLOUR INDICATIONS

Initially, the inhibitor will cause a pale transparent green coloration to the water. After some time the coloration may change to greenish-yellow. In either case, these colours indicate that the cooling system is being protected.

NEW RADIATOR PROCEDURE

Where a new radiator is fitted, use inhibitor HN-1109 and drain after the first 6 months or 10,000 kilometres. (Refer to page 60.)

USE OF ANTI-FREEZE FLUID

The recommended anti-freeze fluid is permanent type (ethylene glycol) GM 1899M, which can be obtained through a dealer who, before adding, should make a thorough check of the cooling system.

Note: Anti-freeze provides the action of a corrosion inhibitor, eliminating the necessity for a separate additive.
Where a vehicle is to be parked overnight or operated for any length of time in regions where temperatures of 0°C or below are encountered (e.g.—snow areas), the recommended brand of anti-freeze fluid should be used in accordance with the instructions specified.

COLD WEATHER DRAINING

If the recommended brand of anti-freeze fluid is not available, the radiator, and cylinder case, MUST be drained before parking to prevent the possible bursting of the radiator, or cracking of the cylinder block which can occur if the coolant freezes.

CAUTION: Draining of the main radiator and cylinder case assembly will not drain the water out of the heater radiator; therefore, the use of Anti-Freeze will eliminate the risk of a damaged heater core.

BATTERY (12 Volt)

The battery is located in a metal cradle mounted on the left hand fender skirt in the engine compartment and the negative (—) terminal is "grounded". Never disconnect the battery or generator when the engine is running. Always connect Positive (+) to Positive (+), Negative (—) to Negative (—) whenever a battery charger is used.

FLUID LEVEL

The battery fluid level should be maintained at 1 cm above the plates by adding distilled water. Distilled water will be required more frequently in summer than in winter. It is a good plan to check the fluid level at least once a week in summer and every two weeks in winter. When long daylight runs are made, water must be added still more frequently. Keep all battery terminals clean and tight.

CAUTION: Never expose a battery to open flame or electric spark — battery action generates hydrogen gas which is flammable and explosive. Don't allow battery fluid to contact skin, eyes, fabrics, or painted surfaces — battery fluid is a sulphuric acid solution which could cause serious personal injury or property damage. Flush any contacted area immediately with water. Wear eye protection such as industrial safety spectacles or goggles when working on or near a battery. Remove rings, metal watchbands and other metal jewellery before jump starting or working around a battery, and be careful in using metal tools — if such metal should contact the positive battery terminal (or metal in contact with it) and any other metal on the vehicle, a short circuit may occur which could cause personal injury. Batteries and battery acid should always be kept out of the reach of children.

BRAKE MASTER CYLINDER

Every 6 months or 10,000 kilometres check the fluid level in the master cylinder. the fluid level should be maintained at 3 mm below the wall top edge. If the master cylinder requires constant topping up it could indicate that a malfunction exists in which case it should be immediately brought to the attention of your servicing GMH Dealer.

AIR CLEANER

The air cleaner element should be removed and cleaned every 6 months or 10,000 km and replaced every 24 months or 40,000 km. If the vehicle is operating in extremely dusty conditions for any length of time the air cleaner should be cleaned more frequently

Ensure that the thermal vacuum signal hose is connected to the carburettor and air cleaner when re-installing the air cleaner.

CAUTION: Do not remove the engine air cleaner unless temporary removal is necessary during repair or maintenance of the vehicle. When the air cleaner is removed backfiring can cause fire in the engine compartment.

ENGINE VENTILATION FILTER

The engine ventilation filter is located in the air cleaner cover.

Every 12 months or 20,000 kilometres clean the engine ventilation intake filter with kerosene or a suitable solvent. Dry with compressed air.

EVAPORATIVE CONTROL SYSTEM

Every 24 months or 40,000 kilometres check all fuel and vapour lines and hoses for proper connections and correct routing as well as condition. Remove canister and check for cracks or damage. Replace damaged or deteriorated parts as necessary. Replace filter in lower section of canister.

WINDSHIELD NOTES

WINDSHIELD CLEANLINESS

It is imperative, at all times, that the windshield surface be maintained in a clean condition so that the wiper blades may be as effective as possible in wiping clean the surface. Use of the windshield washer and Optikleen washer solvent will assist in removing dirt and dust particularly when driving at a time when no rain is falling; however, every opportunity should be taken to wipe or wash the windshield by hand (most Service Stations have such a service today as a courtesy item). Abrasive materials must never be used to remove a build-up of road scum, etc., as a scratched windshield will cause difficulty in achieving proper vision, particularly in night driving. Therefore, after the windshield has been cleaned with a wet sponge etc., it should be wiped dry with a soft, lint free cloth or even a ball of newspaper.

WINDSHIELD WIPER BLADES—CLEANING

Much of the oily road scum thrown up onto the windshield glass, causing smearing when the wiper is switched on, transfers onto the wiper blade. Many owners, whilst they methodically clean the windshield glass, omit to clean the wiper blades and consequently smearing of the glass reappears immediately the wiper blades are set in motion.

The blades can be cleaned by simply lifting them off the windshield glass and then using warm water and a recognised washing fluid. If so desired, the wiper blade can be removed from the arm for cleaning purposes by simply disengaging it from the arm in accordance with the following instructions:—

1. Insert the tip of a narrow bladed screwdriver into the slot on the top centre of the wiper blade and depress the wiper blade retaining spring downwards to clear the groove in the retaining pin fitted to the wiper arm. Pull the blade away from the arm in the direction of the retaining pin.

2. To replace the blade reverse the above procedure ensuring that the retaining spring snaps home.

WINDSHIELD WASHER RESERVOIR

A plastic reservoir containing liquid for the windshield washer is mounted in the engine compartment. It is suggested that when checking the radiator coolant level, the washer reservoir be checked also. For a crystal clear view Optikleen Washer Solvent (Part Number M37068) can be used by adding from the graduated container, the recommended proportion.

CAUTION: Do not operate the wiper blades by hand as this may damage the wiper drive mechanism.

In dry conditions, if the wiper blades are used to clean dust and dirt from the windshield always use the washer system to wet the windshield. Ensure that the windshield washer reservoir is checked regularly all the year round.

Should the wiper blades be frozen to the windshield, it is imperative that they be lifted off and freed by hand before switching on the windshield wiper system.

LUBRICANTS

CHASSIS

ENGINE OIL
(Refer Page 58 for grades and application.)

POWER STEERING FLUID
DEXRON* Automatic Transmission Fluid.

AUTOMATIC TRANSMISSION FLUID
*DEXRON II automatic transmission fluid only, should be used for topping up or service refills.
*DEXRON is a registered trademark of General Motors Corporation.

REAR AXLE OIL
Multipurpose Hypoid gear oil to specification — in this order of preference — HN1386, HN1187, HN1181. Limited Slip Differential — where fitted use oil to GM9985035 specification only.

FRONT SUSPENSION AND STEERING BALL JOINTS
E.P. Type Lithium grease to GM 9985038 specification wherever possible. Otherwise always ensure that a high quality grease of suitable type is used.

FRONT WHEEL BEARINGS
Disc Brakes — Grease to HN1227 specification.

BRAKE FLUID
Fluid to GM 4653M Type 450 specification.

CONTROL SYSTEMS
Brake Pedal Pivots, Transmission Control Linkage, Accelerator Pivots, Parking Brake System, Pivot and Guides.
Grease to HN1225 (LG-2) specification.

BODY

Normal use of a vehicle causes metal-to-metal movement at certain points in the body. Noise, wear and improper operation at these points will result when a protective film of lubricant is not provided. Servicing and lubrication of the undermentioned points should be an integral part of the lubrication service and should be checked out as required every 6 months or 10,000 kilometres.

POWDERED GRAPHITE
(Apply through key aperture) Door Lock Cylinder
Instrument Panel Compartment Lock Cylinder
Rear Compartment Lid Lock Cylinder

NON-STAINING GREASE OR ZINC OXIDE GREASE
(Use sparingly on parts likely to be contacted by clothing)
Engine Hood Catch and Lock
Rear Compartment Hinges
Engine Hood and Door Hinges

SOLIDOIL (Use sparingly on working surfaces)
Door Lock Fork
Door Lock Striker Bolt

IMPORTANT: Remove all lubricants that may have dropped or spread onto the external paint finish.

TYRES

TYRE PLACARD

Each vehicle has an appropriately designed placard adhered to the inside surface of the instrument panel compartment lid. By taking note of the tyre size fitted to the vehicle, the correct inflation pressure for a particular load application can be selected.

NOTE

The tyre placard lists tyre and rim combinations that are approved for fitment to the vehicle. However, for any particular tyre size designation, tyres with a higher speed rating, (refer note on tyre speed rating Page 68) and/or with a maximum load rating in excess of that listed on the placard are also acceptable, provided they are fitted to the nominated rim size.

For example:—

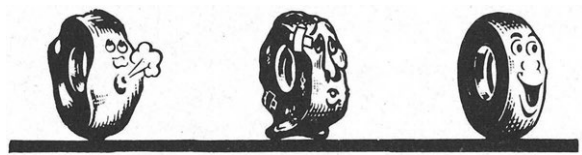
TYRE SIZE DESIGNATION		MAXIMUM LOAD RATING	
Listed	**Others Acceptable**	**Listed**	**Others Acceptable**
E78S14	E78H14	635 kg	Greater than 635 kg
185SR14	185HR14	617 kg	Greater than 617 kg

TYRE SIZES

Some sizes listed may not be available as Regular Production Options. However, they may be fitted as replacements in an approved manner, provided the rim size specification is suitable as shown on the Tyre Placard.

TYRE CARE

Tyres should be checked regularly for proper inflation pressure, wear, and damage. The following information will assist you in properly caring for your tyres.



OVER INFLATION
Hard Ride, Poor Traction, Fabric Breaks

UNDER INFLATION
Runs Hot, Loosens Cords, Blowouts, Uneven Wear

PROPER INFLATION
Good Ride, Good Traction, Good Wear

TYRE PRESSURE RECOMMENDATIONS

1. Tyre pressures should be checked when the tyres are cold, i.e. when the vehicle has been inoperative for 3 hours or more, or driven less than 2 kilometres.

2. Tyre inflation pressure may increase as much as 40 kPa when hot i.e. after the vehicle has been driven 15 kilometres or at speeds of more than 95 km/h. Do not bleed or reduce pressures to compensate for this build-up.

3. For continuous high speed operation, over 120 km/h increase tyre inflation pressure 30kPa above the recommended pressures up to a maximum of 250 kPa cold pressure. Sustained speeds obove 120 km/h are not recommended when a pressure adjustment would require pressures greater than the maximum pressures.

4. Always use a tyre pressure gauge when checking pressures as the appearance of a tyre can be deceiving, depending on vehicle loading.

RECOMMENDATIONS ON TYRE ROTATION

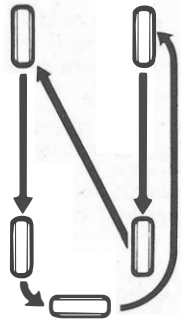
Front and rear tyres perform different functions on a vehicle, (steering versus propelling the vehicle). Due to their function, front tyres normally experience shoulder wear whilst rear tyres are more prone to crown wear. Tyre rotation may be used to equalize wear between front and rear tyres. (Refer diagram below.)

Tyres should be inspected at the 5000 kilometre inspection and adjustment and then at 10,000 kilometre intervals. If no abnormal or uneven wear is detected, and you have not experienced any vibration problems, the tyres need not be rotated or balanced.

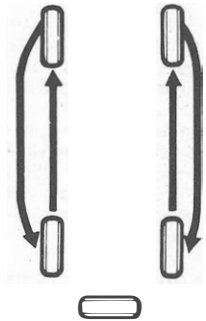
NOTE: Tyres should be rotated prior to regular inspections, if irregular wear develops, ensuring that the reason for the problem is corrected simultaneously.

After rotation, tyre pressures should be adjusted in accordance with the recommendations on the tyre placard.

BIAS-PLY TYRES



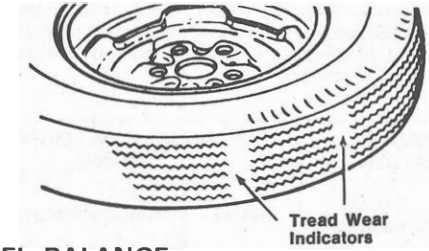
RADIAL TYRES



TYRE WEAR

Uneven or abnormal tyre wear is usually the result of incorrect inflation pressure, improper wheel alignment, wheels being out-of-balance, or poor driving habits. Under-inflation, incorrect toe-in or camber and fast cornering produce different types of abnormal wear which can be diagnosed by any GMH Dealer. The original equipment tyres incorporate built-in tread wear bars which act as indicators to assist in determining when the tyres have worn to the point of needing immediate replacement.

CAUTION: When the wear bars appear, tyre replacement should not be delayed, in the interests of safety.



WHEEL BALANCE

Precise wheel and tyre balance is essential if smooth high-speed running and long tyre life are to be obtained. It is advisable to have the wheels and tyres statically and dynamically balanced by a GMH Dealer after every tyre replacement or as required.

TYRE DAMAGE AND REPAIR

Tyres with cuts, splits or cracks deep enough to expose the fabric, should be replaced. Bulges also indicate internal damage, and these tyres should also be replaced. Tyres with doubtful damage should be removed from the wheel and examined by a competent person.
If a pressure loss occurs while driving, do not attempt to drive on the deflated tyre more than is necessary to stop safely. Driving even a short distance on a deflated tyre can damage it beyond repair.
When puncturing objects are removed, repairs will have to be made according to the recommendations of the tyre manufacturer.
It should always be remembered that a tyre which has been repaired may not be able to be operated safely at the rated maximum speed and due care should be taken.

NOTE: The installation of an inner tube in a repaired radial tubeless tyre is not recommended.

REPLACEMENT TYRES

When replacing tyres only the size, load range and construction type recommended on the Tyre Placard should be fitted. Use of any other tyre or tyre type may seriously affect ride, handling, speedometer/odometer calibration, vehicle ground clearance and tyre clearance to the body and chassis. The following should also be considered when replacing tyres.

1. To achieve best all round vehicle performance, bias-belted tyres and bias tyres should not be mixed on the same vehicle.

2. Because of possible adverse effects on vehicle handling, do not mix radial ply tyres with other types of tyres.

3. It is recommended that new tyres be installed in pairs and be fitted to the front.

4. When replacing only one tyre, it should be paired with the tyre having the least wear, to equalize braking traction.

5. When replacing original tyres with another size which have a different outside diameter, the speedometer and odometer will be affected unless a different speedometer drive gear is used.

REPLACEMENT WHEELS

When replacing wheels for any reason, care should be taken to ensure that the wheels are equivalent to those removed in diameter, rim width and offset.

TYRE TRACTION

CAUTION: A decrease in driving, cornering, and braking traction occurs when water, snow, ice, gravel, or other material is on the road surface. Driving practices and vehicle speed should be adjusted to the road conditions.

When driving on wet or slushy roads, it is possible for a wedge of water to build up between the tyre and road surface. This phenomenon, known as hydro-planing, may cause partial or complete loss of traction, which adversely affects vehicle control and stopping ability. To reduce the possibility of traction loss, the following precautions should be observed:

1. Reduce speed levels during rainstorms or when roads are slushy and if the road has standing water or puddles.

2. Replace tyres when tread wear indicators are visible.

3. Check that tyres are properly inflated for speed range and vehicle loading.

TYRES AND FAST MOTORING

For high speed or improved performance and handling, tyre pressures may be increased at the expense of riding comfort.
With this in mind, we consider it advisable to offer some comments concerning the operation of tyres at high speeds as the maximum permissible speed for a tyre cannot be defined without qualification. For example, the prevailing air temperature, the type of road surface, the inflation pressure, and in particular, whether the vehicle is going to be driven at high speeds for long periods, or whether high speeds will be only for short intervals, are some of the things which must be taken into consideration.
However, it should be noted that all the maximum speed recommendations require the following of the tyres:

1. Good condition, the walls and treads being free of cuts and abrasions.
2. Treads are not excessively worn, tread pattern still being visible over the entire tread surface.
3. The tyres are not retreaded or regrooved.
4. Pressure increases as shown on the Tyre Placard for loading and speed operation.

The Tyre Speed Rating is indicated in the designation of tyre by a letter—

ON RADIAL PLY TYRES:—

W (Winter Tread) indicates a speed rating of 135 km/h
— indicates a speed rating of 170 km/h
S indicates a speed rating of 180 km/h
H indicates a speed rating of 210 km/h
Examples: ER78-14 : ER78S14 : ER70H14

ON CONVENTIONAL CONSTRUCTION TYRES:—
— indicates a speed rating of 150 km/h
L indicates a speed rating of 160 km/h
S indicates a speed rating of 175 km/h
H indicates a speed rating of 200 km/h
W indicates a speed rating of 135 km/h
Examples: E78-14 : E78L14 : E78S14 : E78H14

RADIAL PLY TYRES

Tyres so constructed have Radial marked on the tyre. Because of the stiffening belt under the tread, the ride characteristics of Radial Ply Tyres may be somewhat different from that experienced with conventional tyres. The under-inflated appearance of the radial tyre is normal. Follow the inflation pressure recommended on the Tyre Placard. To achieve the best all-round vehicle performance radial ply tyres should be used at all four wheel positions; that is, radial ply tyres and conventional tyres should not be mixed.

IMPORTANT: In very rough country, radial ply tyres should be operated at maximum pressures in order to minimize the possibility of damage to the sidewalls.

HEAVY TREADS

Caution must be exercised when using tyres with heavy treads, including tyres designed to gain traction in bad weather conditions. At sustained high speeds, this type of tyre will run at higher temperatures than standard tyres and consequently should only be operated within the limits recommended by the manufacturer. Any doubts concerning the fitness of the tyres on your vehicle for the purpose you require should be referred to your GMH Dealer, who will be pleased to advise.

VEHICLE LOADING INFORMATION

OVERLOADING

The components of your vehicle are designed to provide satisfactory service if the vehicle is not loaded in excess of the weight specified.

Overloading can create serious potential safety hazards and can also shorten the service life of your vehicle. Your GMH Dealer can advise you concerning the proper loading conditions.

TYRE MAXIMUM LOAD RATING AND MAXIMUM VEHICLE LOADING

Kerb weight is the weight of an unloaded vehicle which includes the weight of all coolants and lubricants together with a full tank of fuel.

It must be understood that the maximum load rating shown on the tyre placard is not an actual load capacity that can be used for each wheel.

While the tyre manufacturers rate the tyre for this load application at the maximum pressure shown on the placard, the vehicle manufacturer's suspension, ride and handling characteristics must be taken into account. Therefore, the maximum rear axle loading or the maximum loaded vehicle weight should not be exceeded.

TOW BAR LOADS

Except where a passenger vehicle is fitted with an equalising load trailer hitch and extra heavy duty equipment as required by GMH, the load imposed on the tow bar ball must be included in the maximum rear axle loading and the maximum loaded vehicle weight. (Refer also to page 16.)

NOTE: The maximum rear axle loading and maximum loaded vehicle weights are not to be exceeded, regardless of type of hitch used.

ROOF RACK LOADS

No increase in maximum loaded vehicle weight is allowable where a roof rack is fitted. It must be understood that roof rack loads alter the handling characteristics of a vehicle due to a change in the centre of gravity. When carrying loads on the roof rack avoid abrupt swerving or sharp steering manoeuvres. The load should be evenly distributed.

A load of no more than 68kg is suggested as a reasonable limit.

VEHICLE WEIGHT CHART

MODEL	KERB WEIGHT kg	MAXIMUM REAR AXLE LOADING kg	MAXIMUM LOADED VEHICLE WEIGHT kg
STATESMAN DE VILLE	1598	1088	2141
STATESMAN CAPRICE	1695	1088	2098

BULB REPLACEMENT

HEADLAMPS

Replacement of these units is recommended only by a GMH Dealer or a competent person, as the aim should be rechecked after replacement in case the setting has been disturbed.

FRONT PARKING AND TURN SIGNAL LAMPS

These lamps are mounted in one combined lamp body and have only one lens. The top clear section of the lens is the parking lamp and the lower amber section is the turn signal lamp.
To gain access to the bulbs unscrew the two cross-head screws which secure the lens. Take off the lens and the bulb can then be removed.
To remove the parking lamp bulb, pull it straight out of the socket.
To remove the turn signal bulb, which is the normal bayonet type, use a twisting motion to disengage the lugs and then pull it straight out.
Care should be taken to make sure that the lens gasket is not dislodged from its groove in the lamp body during lens removal or replacement.

REAR STOP/TAIL, TURN SIGNAL AND BACK-UP LAMPS

Access to the bulbs for these lamps is gained from inside the luggage compartment. Each bulb holder is removed using a twisting motion which unlocks it from the lamp body. The bulb can then be removed. The stop/tail lamp bulb has a bayonet cap with offset pins to ensure correct positioning of the filaments. The turn signal/back-up lamp bulb has an ordinary bayonet cap.

REAR LICENCE PLATE LAMP

This lamp is located in the centre portion of the bumper bar above the licence plate. To replace the bulb, reach into the opening in bumper bar and deflect downward the rubber-mounted licence lamp bracket. The bulb, which is a normal bayonet type can then be removed by using a twisting motion to disengage the lugs and then pulling it straight out of its socket. The bracket will then swing back into the correct position.

INSTRUMENT PANEL, CONSOLE LAMPS AND INTERIOR LIGHTING

Replacement of these bulbs is recommended only by a GMH Dealer or a competent person as all wiring and associated attachments are prone to damage if not serviced correctly.

INSTRUMENT PANEL COMPARTMENT BULB

The bulb is located directly behind the activating button which is at the top left hand corner of the compartment. Access to the bulb is gained through the square hole immediately adjacent to the button. The bulb, which is a normal bayonet type can then be removed by using a twisting motion to disengage the lugs and then pulling it straight out of its socket.

INTERIOR DOME LAMP

To remove, gently squeeze together the long sides of the plastic lens (not the plastic surround) to gain access to the bulb. The bulb is of the festoon type and can be removed by pulling it straight out from its retaining clips.

LUGGAGE COMPARTMENT LAMP

The bulb is mounted in a socket which is located at the top right hand side of the luggage compartment, adjacent to the steel cargo barrier. The bulb, which is a normal bayonet type can then be removed by using a twisting motion to disengage the lugs and the pulling it straight out of its socket.

FUEL ECONOMY

HOW TO IMPROVE IT

How you drive, where you drive, and when you drive; all have an effect on the distance that can be travelled using a given quantity of fuel. The attention you give your vehicle as far as maintenance and repairs are concerned, will also contribute to fuel economy.

FUEL SELECTION:
(Refer to Page 54.)

HARD ACCELERATION:
Fuel can be conserved and engine and tyre life prolonged by avoiding unnecessarily hard acceleration.

STOP-AND-START DRIVING:
Frequent stops and starts during a trip really cuts down on your fuel economy. Plan your short trips to take advantage of through streets. Also, pace your driving to avoid unnecessary stops by observing traffic flow and traffic light co-ordination on the regular routes you use.

SPEED VERSUS CONSUMPTION:
Excessive speed on the highway raises your fuel consumption. Statistics show that you might save up to 20% on your fuel costs by driving at 80 km/h instead of 110 km/h.

ENGINE IDLING:
An idling engine uses fuel. If you have to wait for more than a few minutes, turning off the engine will conserve fuel.

HARD DRIVING IN BUILT UP AREAS:
Energy is wasted as heat when braking. Hard driving up to stopping points is wasting fuel, as energy in the form of fuel is also needed to accelerate again. This situation can often be avoided.

AIR CLEANER ELEMENT:
Your vehicle receives its power from a mixture of fuel and air, so it's important to replace the air cleaner element at the required intervals. A dirty air cleaner element reduces engine efficiency.

ENGINE TUNE:
Overall tuning (a check on timing, distributor points, spark plugs and emission control systems) can improve your vehicle's fuel economy. An "out-of-tune" engine cannot give good fuel economy.

EXCESS WEIGHT:
Fuel economy is related to the work the engine must do. The heavier the load, the more power it takes. Keep excess weight to a minimum.

TYRE INFLATION:
Under inflation not only causes needless wear of the tyres, but can also waste fuel. It's a good idea to check tyre pressures every week, or as needed, for the loads carried.

WHEEL ALIGNMENT:
Incorrect alignment has the effect of dragging the front tyres and causes premature tyre wear. It takes power to work against this extra load which consumes fuel.

AIR CONDITIONER OPERATION:
By using the vent setting, most of the advantages of the integrated air conditioning system can be obtained in cool and moderate temperature conditions while at the same time using the least amount of engine power.

SECTION—6 **SPECIFICATIONS**

SERIAL NUMBERS

V.I.N. PLATE

(VEHICLE IDENTIFICATION NUMBER)

Attached to the top shroud ledge of the dash panel on the right hand side (Driver's side) under the engine hood.

VEHICLE SERIAL NUMBER

(CHASSIS NUMBER)

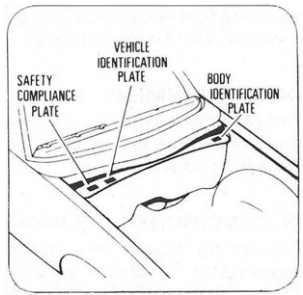
Stamped on a paint-free zone on the top face of the right hand frame member at the front end — access under the engine hood.

BODY SERIAL NUMBER PLATE

Attached to the top ledge of the dash panel on the left hand side (Passenger's side) under the engine hood. Plate shows body styles, body serial number, paint and trim colour combination, paint number, Engine, Transmission and Axle Ratio Options.

SAFETY COMPLIANCE PLATE

Attached to the top ledge of the dash panel on the right hand side (Driver's side) under the engine hood. Shows vehicle Series, Model, Style, Month and Year of production, Vehicle Serial Number, approved seating capacity, and the Australian Design Rules to which the vehicle complies. (Refer illustration.)



ENGINE NUMBER PREFIXES

QR — 4.2 — 9.4 to 1 C.R.
QT — 5.0 — 9.7 to 1 C.R.

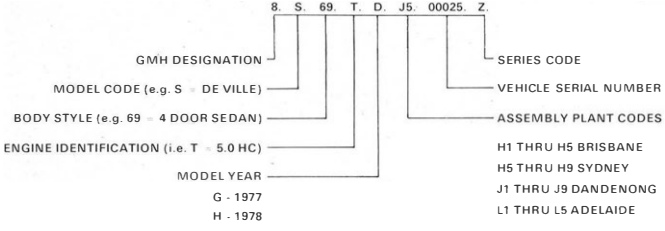
Stamped on a pad on the left hand side (Passenger's side) at the front of the cylinder block above the engine mounting.

MODEL IDENTIFICATION

Model Range	Model Group	Style Number	V.I.N. Code Number
Statesman De Ville	8WS	69	8S69
Statesman Caprice	8WT	69	8T69

VEHICLE IDENTIFICATION NUMBER (V.I.N.)

The table below gives a breakdown of the V.I.N. and the meaning of each section.


8. S. 69. T. D. J5. 00025. Z.
GMH DESIGNATION
MODEL CODE (e.g. S - DE VILLE)
BODY STYLE (e.g. 69 - 4 DOOR SEDAN)
ENGINE IDENTIFICATION (i.e. T - 5.0 HC)
MODEL YEAR
G - 1977
H - 1978
SERIES CODE
VEHICLE SERIAL NUMBER
ASSEMBLY PLANT CODES
H1 THRU H5 BRISBANE
H5 THRU H9 SYDNEY
J1 THRU J9 DANDENONG
L1 THRU L5 ADELAIDE

WHEEL NUT TORQUE — 75-80 Nm

VEHICLE DIMENSIONS

ITEM	Millimetres
OVERALL LENGTH	
DE VILLE	5182
CAPRICE	5184
OVERALL WIDTH	
DE VILLE	1892
CAPRICE	1892
OVERALL HEIGHT*	
DE VILLE	1407
CAPRICE	1402
MINIMUM GROUND CLEARANCE*	
DE VILLE	147
CAPRICE	142
WHEELBASE	
DE VILLE	2895
CAPRICE	2895
TRACK	
STANDARD WHEELS—FRONT	1524
—REAR	1537
WIRE WHEELS—FRONT	1530
—REAR	1542
POLYCAST WHEELS—FRONT	1533
—REAR	1546

*At 2/3 Vehicle Load Capacity.

ENGINE DATA

ENGINE DESIGNATION ►	4.2 Litre	5.0 Litre
Piston Disp. Nom.—Cu. Cms.	4142	5044
Comp. Ratio : 1	9.4	9.7
Petrol Research Octane Rating	98	98
Number Cylinders	EIGHT	
Bore/Stroke mm	92.075 x 77.775	101.600 x 77.775
Taxable H.P. RAC or SAE	42.0	51.2
Kilowatts Gross @ R.P.M.	120@ 4550	161@ 4800
Torque NM Gross@ R.P.M.	325@ 2600	400@ 3100
Cylinder Numbering (Front to Rear)	R.H. BANK 1 3 5 7 L.H. BANK 2 4 6 8	
Firing Order	1 2 7 8 4 5 6 3	

CAPACITIES

ENGINE OIL:

		Litres
Service Refill.	(b)	4.0
Add for Filter.	(b)	0.8

AUTOMATIC TRANSMISSION

TURBO HYDRAMATIC

Service Refill — Approximate	(b)	3.7
Dry	(a) (b)	10.4

REAR AXLE

All Models	(a)	1.4

(a) — Only at Overhaul
(b) — Use oil level for final check

COOLING SYSTEM

	Litres
4.2 Litre	12.0
5.0 Litre	11.3

Pressure Rating of Radiator Cap 103 kPa (15 PSI)

FUEL TANK — 72.7 litres

CLEARANCES AND SETTINGS

DISTRIBUTOR — Point Opening — Cam Angle Dwell	.41 mm 26°/30°
VALVE CLEARANCE — Inlet (Hot) — Exhaust (Hot)	 Zero (Non Adjustable) Zero (Non Adjustable)
SPARK PLUG GAP	1 mm

CARBURETTOR MIXTURE

The mixture control of the carburettor has been sealed and the idling speed set to comply with the Australian Design Rules. The reason for this is to conform to anti-pollution measures.
Your GMH Dealer has the full information concerning the foregoing.

FUSE SYSTEM

FUSES

The fuse block is located behind a flush fitting plastic cover at the lower right hand corner of the instrument panel, adjacent to the hood release. To gain access to the fuses remove the cover by using the recess provided. The fuses can be identified by referring to the fuse layout on the reverse side of the cover.

If after replacing a burnt-out fuse, the new fuse burns out, this indicates that the fuse is still overloaded. The cause of the fault should be located and rectified, preferably by a GMH Dealer.

FUSIBLE LINK

In order to reduce the possibility of a fire, whether due to electrical causes or an accident, the wiring harness is protected by the inclusion of a fusible link, located in the harness next to the starter motor. In case of a short circuit, the link will melt internally, disconnecting the battery by the fusing action. The encasing insulation has been specially designed to withstand the temperature and to contain the fused wires. Thus the fusible link provides a combined fuse and fire protection feature.

THERMAL CIRCUIT INTERRUPTOR

The headlamp circuit is protected by a thermal interruptor incorporated in the lighting switch. If the current load is excessive, due to a short circuit for example, contact points in the interruptor open and close rapidly thus making and breaking the circuit, and so reducing the current sufficiently to prevent damage to the wiring. This action continues until the fault is eliminated. During this action of the interruptor there is usually sufficient light maintained to enable the vehicle to be driven to the nearest service station. If the interruptor does come into action the cause should be located and the trouble rectified as soon as possible.

Device or Circuit Protected	Feed Control	Fuse Number and Capacity
Turn Signal Lights Windshield Washer Windshield Wiper Power Antenna	ACC or ON on Ignition Switch	3AG or AGC 15 amps.
Instrument Lights Auto. Trans. Console Light	ON on light switch	1AG or AGA 3 amps.
Cigarette Lighter Heated Rear Window.	ACC or ON on Ignition Switch	3AG or AGC 25 amps.
Brake Warning Light. Back-Up Lamps Gauges/Indicators Power Window Relay Emission Controls	ON on Ignition Switch	3AG or AGC 15 amps.
Instrument Panel Lights Licence Plate Lamps. Tail Lamps and Parking Lamps Interior Lamps Luggage Compartment Lamp Instrument Panel Compartment Light	Battery	3AG or AGC 15 amps.
Power Antenna (Auto Retract) Horns/Clock	Battery	3AG or AGC 15 amps.
Stop Lamps Headlamp Flash	Battery	3AG or AGC 15 amps.
Radio	ACC or ON on Ignition Switch	1AG or AGA 3 amps.
Heater/Demister or Air Conditioner Dwell Control	ACC or ON on Ignition switch	3AG or AGC 15 amps. 25 amps. If A/C fitted
Headlamps	Battery	Circuit Interruptor in Switch
Power Window	Battery	Circuit Breaker

HEADLAMP AND BULB SPECIFICATIONS

HEADLAMPS	GM Part Number	Trade Part Number	Power Rating
4 Lamp System — 146 mm Units (Quartz Halogen)			
Inner	9945933	—	55 watt
Outer	9946097	—	55 watt

Bulbs	GM Part Number	Trade Part Number	Power Rating
Headlamp (Quartz Halogen)	11063919	—	55 watt
Front Turn Signal	9417866	1156	32 C.P.
Parking (Front)	9421330	194	2 C.P.
Tail and Stop (Double Filament)	9417867	1157	4-32 C.P.
Rear Turn Signal and Back-up	9417866	1156	32 C.P.
Headlamp Hi-Beam Indicator	9421330	194	2 C.P.
Instrument Illumination	9421330	194	2 C.P.
Oil Pressure and Gen. Tell-tale	SP2103	—	1.2 watt
Dome Lamp — Centre (Normal)	9414045	211	12 C.P.
(Optional)	9422525	211/1	12 C.P.
— Reading Lamps	455136	—	15 C.P.
Foot Well	SP-1467	989	6 watt
Rear Quarter Corner	SP-1932	—	5 watt
Rear Quarter Reading Lamp	455136	—	15 C.P.
Turn Signal Tell-tale	SP2103	—	1.2 watt
Licence Plate	9417863	1895	2 C.P.
Luggage Compartment	455490	1003	15 C.P.
Instrument Panel Compartment	9421330	194	2 C.P.
Brake Warning & Parking Brake Tell-Tale	9421330	194	2 C.P.
Transmission Selector (Column)	9421330	194	2 C.P.
Transmission Selector (Console)	9417863	1895	2 C.P.
Ash Tray and Cigarette Lighter Illumination	SP2103	—	1.2 watt
Heater and Air/cond. Control Illumination	9417863	1895	2 C.P.

SECTION—7 **OWNER RELATIONS**

The satisfaction and goodwill of all owners of General Motors-Holden's products are of primary concern to your Dealer and General Motors-Holden's. Normally, any problems that arise in connection with the sales transaction or the operation of your vehicle will be handled by your Dealer's Sales or Service Departments. It is recognized, however, that despite the best intentions of everyone concerned, misunderstandings may sometimes occur. If you have a problem that has not been handled to your satisfaction through normal channels, we suggest that you take the following steps:—

Step One — Discuss your problem with a member of dealership management. Frequently, complaints are the result of a breakdown in communication which should be quickly resolved. If the problem has already been reviewed with the Sales Manager or Service Manager of the Dealership, contact the General Manager, or the Dealer Operator.

Step Two — Should it appear that your problem cannot be readily resolved by the dealership without additional assistance, the matter can be brought to the attention of the Zone Owner Relations Manager in your State:

LETTERS SHOULD BE ADDRESSED TO "The Zone Owner Relations Manager" at one of the following locations.

When writing, it greatly assists if you provide the following information:—

YOUR NAME, ADDRESS, TELEPHONE NUMBER
*VEHICLE MODEL AND V.I.N.
*VEHICLE DELIVERY DATE AND ODOMETER READING
DEALER'S NAME AND LOCATION
NATURE OF PROBLEM

***N.B.** THIS INFORMATION IS READILY AVAILABLE FROM YOUR WARRANTY CERTIFICATE.

QUEENSLAND
General Motors-Holden's Sales Pty. Ltd.,
Box 728, G.P.O.,
BRISBANE, QLD. 4001.

NEW SOUTH WALES AND AUSTRALIAN CAPITAL TERRITORY
General Motors-Holden's Sales Pty. Ltd.,
Box 4239, G.P.O.,
SYDNEY, N.S.W. 2001

VICTORIA AND TASMANIA
General Motors-Holden's Sales Pty. Ltd.,
Box 1273L, G.P.O.,
MELBOURNE, VIC. 3001.

SOUTH AUSTRALIA AND NORTHERN TERRITORY
General Motors-Holden's Sales Pty. Ltd.,
Box 96, P.O.,
ELIZABETH, S.A. 5112.

WESTERN AUSTRALIA
General Motors-Holden's Sales Pty. Ltd.,
P.O. Box 426,
WEST PERTH, W.A. 6005.

Step Three — In the unlikely event that after contacting the Zone Owner Relations Manager you are not satisfied, you have another avenue of approach which is, to write to the **National Owner Relations Manager, General Motors-Holden's Sales Pty. Ltd., P.O. Box 5431 C.C., Melbourne, Victoria 3001.** However, if you contact the Zone or the National Owner Relations Manager, please bear in mind that ultimately the problem will be resolved in the dealership, utilizing the Dealer's facilities, equipment, and personnel. It is suggested, therefore, that you follow the above steps in sequence when pursuing a problem.

SECTION — 8 **AUTHORISED GMH DEALERS**

QUEENSLAND — METROPOLITAN DEALERS

ALBION
Bill Harrison Car Sales,
Cnr. Frodsham Street and Crosby Road

ASPLEY
Zupps (Aspley) Pty. Ltd.,
1442 Gympie Road

MOOROOKA
John Sivyer Pty. Ltd.,
1060 Ipswich Road

MT. GRAVATT
Zupps Motors Pty. Ltd.,
1310 Logan Road

NEWSTEAD
Eagers Retail Pty. Ltd.,
95 Breakfast Creek Road

NUNDAH
Eagers (Northside),
Cnr. New Sandgate Road and Wood Street

OXLEY
Miall-Phillips Holden,
2193 Ipswich Road

REDCLIFFE
Kevin Healey Motors,
425 Elizabeth Avenue

STONES CORNER
Leach Motors Holden,
456 Logan Road

TARINGA
Safeway Holden,
135 Moggill Road

WINDSOR
Leach Motors
Newmarket Road

WOOLOONGABBA, South Brisbane
Eagers (Southside),
Cnr. Logan Road and Trafalgar Street

WYNNUM
G. & B. Holden,
200 Tingall Road

VALLEY
Eagers Retail Pty. Ltd.
Ann and Marshall Streets

AUTHORISED GMH DEALERS

QUEENSLAND — COUNTRY DEALERS & SERVICE DEALERS

ALLORA
ATHERTON
AUGATHELLA
AYR
BARCALDINE
BEAUDESERT
BEENLEIGH
BEERWAH
BIGGENDEN
BILOELA
BLACKALL
BOWEN
BUNDABERG
CABOOLTURE
CAIRNS
CALOUNDRA
CHARLEVILLE
CHARTERS TOWERS
CHINCHILLA
CLERMONT
CLEVELAND
CLONCURRY
COOLANGATTA
COOROY
CUNNAMULLA
DALBY
DIRRANBANDI
EMERALD
GATTON
GAYNDAH
GLADSTONE
GOONDIWINDI
GYMPIE
HUGHENDEN
INGHAM
INGLEWOOD
INNISFAIL
IPSWICH
JANDOWAE
JULIA CREEK
KILCOY
KINGAROY
LAIDLEY
MACKAY
MAREEBA
MARYBOROUGH
MILES
MITCHELL
MONTO
MORVEN
MOURA
MT. ISA
MURGON
NAMBOUR
NANANGO
PETRIE
PROSERPINE
QUILPIE
ROCKHAMPTON
ROMA
SOUTHPORT
SPRINGSURE
STANTHORPE
ST. GEORGE
TARA
TEXAS
TOOWOOMBA
TOWNSVILLE
TULLY
WARWICK
WINTON
YULEBA

AUTHORISED GMH DEALERS

NEW SOUTH WALES—METROPOLITAN DEALERS

ARNCLIFFE
Sutton's Motors (Arncliffe) Pty. Ltd.,
93 Princes Highway

ASHFIELD
Muirs Motors (Ashfield) Pty. Ltd.,
252 Parramatta Road

AUBURN
Sturgess Holden
235 Parramatta Road

BALGOWLAH
Ross Hannon Holden
164 Condamine Street

BANKSTOWN
Boyded (Bankstown)
236-242 South Terrace

BAULKHAM HILLS
Tony Packard Holden
Cnr. Victoria Avenue and Windsor Road

BLACKTOWN
Mitchell & Townsend,
125 Main Street

CABRAMATTA
Ron Hodgson Holden
266 Hume Highway

CAMPBELLTOWN
Clintons Motors Pty. Ltd.,
3-17 Queen Street

CAMPERDOWN
John A. Gilbert Pty. Ltd.,
36-38 Parramatta Road

CHATSWOOD
Sundell Holden
815-843 Pacific Highway

CHULLORA
Suttons Motors (Chullora) Pty. Ltd.,
Cnr. Hume Highway & Waterloo Road

CROW'S NEST
J. N. Caldwell (Holdings) Pty. Ltd.,
1 Alexander Street

DEE WHY
Norman G. Booth (Dee Why) Pty. Ltd.,
Cnr. May and Mooramba Roads

HOMEBUSH
Gilbert & Roach Pty. Ltd.,
187 Parramatta Road

HOMEBUSH
Suttons Motors (Homebush) Pty. Ltd.,
112 Parramatta Road

HURSTVILLE
Savell Bros. Group Pty. Ltd.,
412 Forest Road

KINGSFORD
John Pelligrini Holden
263-271 Anzac Parade

KINGSWOOD
Max Wright Motors Pty. Ltd.,
107-119 Great Western Highway

LAKEMBA
Nash Holden,
1018 Canterbury Road

LIVERPOOL
A. C. McGrath & Company,
Cnr. Castlereagh Street and Hume Highway

LIVERPOOL
Pat Cullen's Garage,
324-360 Hume Highway

MIRANDA
W. H. Lober & Co. Pty. Ltd.,
1-3 Kiora Road

MOSMAN
Norman G. Booth Pty. Ltd.,
501 Military Road

NEWPORT BEACH
Sundell Holden,
Barrenjoey Road

PADSTOW
Paul Bagnall Holden,
19 Davies Road

PARRAMATTA
Fair Deal Car Sales Pty. Ltd.,
65 Church Street

PARRAMATTA
Hillsdon's Pty. Ltd.,
87 Church Street

PENNANT HILLS
Les Vagg Holden
351-355 Pennant Hills Road

PETERSHAM
Suttons Motors (Petersham) Pty. Ltd.
654 Parramatta Road

RANDWICK
Boyded (Randwick),
265 Avoca Street

ROCKDALE
C. V. Holland Pty. Ltd.
571 Princes Highway

ROSE BAY
Vern Potts Holden,
505-509 Old South Head Road

RYDE
Muirs Motors (Ryde) Pty. Ltd.,
603-605 Victoria Road

ST. MARY'S
Lance Motors Pty. Ltd.,
412 Western Highway

WAITARA
John A. Gilbert (Northside) Pty. Ltd.,
90 Pacific Highway

WINDSOR
Hawkesbury Valley Motors,
122 George Street

AUTHORISED GMH DEALERS

NEW SOUTH WALES—COUNTRY DEALERS & SERVICE DEALERS

ADELONG
ALBURY
ARDLETHAN
ARMIDALE
BALLINA
BARADINE
BARELLAN
BARHAM
BARRABA
BATHURST
BEGA
BELLINGEN
BELMONT
BLAYNEY
BOGGABRI
BOMBALA
BOURKE
BOWRAL
BREWARRINA
BROKEN HILL
BULAHDELAH
CANOWINDRA
CASINO
CESSNOCK
COBAR
COFF'S HARBOUR
COLLARENEBRI
CONDOBOLIN
COOLAMON
COOMA
COONABARABRAN
COONAMBLE
COOTAMUNDRA
COROWA
COWRA
CROOKWELL
CULCAIRN
DENILIQUIN
DORRIGO
DUBBO
DUNGOG
FINLEY
FORBES
GILGANDRA
GLEN INNES
GLOUCESTER
GOSFORD
GOULBURN
GRAFTON
GRENFELL
GRIFFITH
GULARGAMBONE
GUNDAGAI
GUNNEDAH
GUNNING
GUYRA
HARDEN
HAY
HOLBROOK
INVERELL
JERILDERIE
JUNEE
KANDOS
KATOOMBA
KEMPSEY
KIAMA
KURRI KURRI
KYOGLE
LAKE CARGELLIGO
LEETON
LISMORE
LITHGOW
MACKSVILLE
MAITLAND
MILTON
MOLONG
MOREE
MORUYA
MOSS VALE
MUDGEE
MULLUMBIMBY
MUNGINDI
MURWILLUMBAH
MUSWELLBROOK
NARRABRI
NARRANDERA
NARROMINE
NEWCASTLE
NOWRA
NYNGAN
ORANGE
PARKES
PEAK HILL
PICTON
PORT MACQUARIE
QUEANBEYAN
QUIRINDI
SCONE
SINGLETON
SPRINGWOOD
TAMWORTH
TAREE
TEMORA
TENTERFIELD
TORONTO
TOTTENHAM
TRANGIE
TULLAMORE
TUMBARUMBA
TUMUT
TWEED HEADS
WAGGA
WALCHA
WALLA WALLA
WALGETT
WARIALDA
WARREN
WAUCHOPE
WELLINGTON
WEST WYALONG
WINGHAM
WOLLONGONG
WOODENBONG
WYONG
YASS
YOUNG

AUSTRALIAN CAPITAL TERRITORY — DEALERS

CANBERRA (SUBURBAN LOCATIONS)
BELCONNEN — BRADDON — PHILLIP

AUTHORISED GMH DEALERS

VICTORIA — METROPOLITAN DEALERS

BENTLEIGH
Boyanton Wray Pty. Ltd.,
280 Centre Road

BERWICK
Noel Gould Pty. Ltd.,
Princes Highway

BALWYN
Southern Motors Box Hill Pty. Ltd.,
126 Whitehorse Road

BRAYBROOK
Kevin Dennis Holden
272 Ballarat Road

BUNDOORA
Watson Holden
413 Grimshaw Street

BURWOOD
Dusting Pty. Ltd.,
1200 Toorak Road

CAULFIELD
Booran Holden,
1049 Glenhuntly Road

CHELSEA
Ron Morphy Holden,
370 Nepean Highway

CHELTENHAM
Balmoral Holden,
1214 Nepean Highway

DANDENONG
Bill Patterson-Cheney Dandenong Pty. Ltd.,
141 Lonsdale Street

DANDENONG
Preston Motors (Dandenong) Pty. Ltd.,
Cnr. Lace and Princes Highway

ELSTERNWICK
Reg. Hunt Motors Pty. Ltd.,
77 Nepean Highway

ESSENDON
Preston Motors (Essendon) Pty. Ltd.,
207-211 Keilor Road

FAWKNER
M. S. & G.Mantello Holden,
1263 Sydney Road

FERNTREE GULLY
Neilson Motors Pty. Ltd.,
980 Burwood Highway

FOOTSCRAY
Preston Motors (Footscray) Pty. Ltd.,
435 Barkly Street

FRANKSTON
Bayside Holden,
54 Playne Street

HASTINGS
Dusting of Hastings
762 Hastings Road

HEIDELBERG WEST
Northpoint Holden,
66 Bell Street

HOPPERS CROSSING
Edward John Holden,
Princes Highway

LILYDALE
Peter Robinson Holden,
Main Street

MORNINGTON
Bill Gleeson Motors,
Main Street

OAKLEIGH
Garry & Warren Smith Pty. Ltd.,
1575 Dandenong Road

PRESTON
Campbell's Motors Pty. Ltd.,
518 High Street

RICHMOND
Kellway Egan Holden,
309-313 Bridge Road

RINGWOOD
Bill Patterson Holden,
45-57 Maroondah Highway

SOUTH MELBOURNE
Bill Patterson-Cheney Melbourne Pty. Ltd.,
16-50 Sturt Street

SOUTH MELBOURNE
Preston Motors Pty. Ltd.,
132 Sturt Street

SPRINGVALE
Graeme Blanchard Holden,
Princes Highway

WARRANDYTE
Getson Holden,
Yarra Street

WEST MELBOURNE
Rhodes Motor Co. Pty. Ltd.,
577 King Street

YARRAVILLE
W. H. & S. Massey Pty. Ltd.,
377 Williamstown Road

AUTHORISED GMH DEALERS

VICTORIA — COUNTRY DEALERS & SERVICE DEALERS

ALEXANDRA
ARARAT
BACCHUS MARSH
BAIRNSDALE
BALLARAT
BENALLA
BENDIGO
BERRIWILLOCK
BIRCHIP
BOORT
CAMPERDOWN
CASTERTON
CASTLEMAINE
CHARLTON
COBRAM
COHUNA
COLAC
COLERAINE
CORRYONG
DAYLESFORD
DERRINALLUM
DIMBOOLA
DONALD
DROUIN
ECHUCA
EUROA
FOSTER
GEELONG
HAMILTON
HEALESVILLE
HEATHCOTE
HOPETOUN
HORSHAM
JEPARIT
KANIVA
KERANG
KOOWEERUP
KORUMBURRA
KYABRAM
KYNETON
LANG LANG
LEONGATHA
MAFFRA
MANSFIELD
MARYBOROUGH
MILDURA
MINYIP
MOE
MORTLAKE
MORWELL
MURRAYVILLE
MYRTLEFORD
NAGAMBIE
NATHALIA
NHILL
NULLAWIL
NUMURKAH
NYAH
ORBOST
OUYEN
PORTLAND
PYRAMID HILL
QUAMBATOOK
RAINBOW
ROCHESTER
RUTHERGLEN
SALE
SEA LAKE
SEYMOUR
SHEPPARTON
ST. ARNAUD
STAWELL
SWAN HILL
TALLANGATTA
TERANG
TIMBOON
TRARALGON
UNDERBOOL
WARBURTON
WARRACKNABEAL
WARRNAMBOOL
WODONGA
WONTHAGGI
WYCHEPROOF
YARRAM

TASMANIA — METROPOLITAN & COUNTRY DEALERS & SERVICE DEALERS

HOBART — **Nettlefold Car & Truck Pty. Ltd.,**
179 Macquarie Street

HOBART — **Motors Pty. Ltd.,**
179 Macquarie Street

BURNIE — **Motors Pty. Ltd.,**
54 Marine Terrace

DEVONPORT — **Motors Pty. Ltd.,**
24 Best Street

HUONVILLE — **Motors Pty. Ltd.,**
Main Street

KING ISLAND — **King Island Motors,**
Currie

LAUNCESTON — **Motors Pty. Ltd.,**
165 Brisbane Street

LAUNCESTON — **Nettlefold Car & Truck Pty. Ltd.,**
71 Bathurst Street

SMITHTON — **Smithton Motors Pty. Ltd.,**
16 Nelson Street

ULVERSTONE — **Motors Pty. Ltd.,**
99 Reibey Street

AUTHORISED GMH DEALERS

SOUTH AUSTRALIA — METROPOLITAN DEALERS

ADELAIDE
Freeman Motors Limited,
215 Grenfell Street

ADELAIDE
United Motors Limited,
62-72 Franklin Street

ELIZABETH
Peter Page Holden,
Elizabeth Way

GAWLER
John Doran Pty. Ltd.,
48 Murray Street

GLENELG
John H. Ellers Pty. Ltd.,
278-288 Brighton Road

MALVERN
Claridge Motors Pty. Ltd.,
361-367 Unley Road

MORPHETT VALE
Coleton Motors Pty. Ltd.,
335-345 Main Road South

PORT ADELAIDE
Smith Motor Co. Pty. Ltd.,
171 Commercial Road

VALLEY VIEW
Plaza Holden,
817-839 North East Road

SOUTH AUSTRALIA — COUNTRY DEALERS & SERVICE DEALERS

ARDROSSAN
BALAKLAVA
BERRI
BORDERTOWN
BRINKWORTH
BURRA
CLARE
CLEVE
CRYSTAL BROOK
CUMMINS
EUDUNDA
GLADSTONE
JAMESTOWN
KADINA
KEITH
KIMBA
KINGSCOTE
KINGSTON
LAMEROO
LOXTON
McLAREN VALE
MAITLAND
MALLALA
MANNUM
MANOORA
MENINGIE
MILLICENT
MINLATON
MT. BARKER
MT. GAMBIER
MURRAY BRIDGE
NARACOORTE
NILDOTTIE
ORROROO
PETERBOROUGH
PINNAROO
PORT AUGUSTA
PORT LINCOLN
PORT PIRIE
QUORN
RENMARK
SEDAN
STRATHALBYN
STREAKY BAY
TANUNDA
TWO WELLS
VICTOR HARBOUR
WAIKERIE
WHYALLA
WUDINNA
YANKALILLA

NORTHERN TERRITORY — DEALERS

ALICE SPRINGS
Kittle Bros. (Alice Springs) Pty. Ltd.,
Wills Terrace

DARWIN
Suttons Motors (Darwin) Pty. Ltd.,
Cnr. Mitchell and Knuckey Streets

AUTHORISED GMH DEALERS

WESTERN AUSTRALIA — METROPOLITAN DEALERS

BELMONT
Major Motors Pty. Ltd.,
225 Great Eastern Highway

CANNINGTON
Shack Motors,
1308 Albany Highway

FREMANTLE
Shack & Kerr Motors Pty. Ltd.,
59 Queen Victoria Street

GOSNELLS
Lance Gibbons Holden,
2325 Albany Highway

MELVILLE
Melville Motors Pty. Ltd.,
532-536 Canning Highway

MIDLAND
Webster Holden,
37 Great Northern Highway

MORLEY
Metro Motors Pty. Ltd.,
212 Walter Road

NAVAL BASE
Shack Motors (Cockburn) Pty. Ltd.,
32 Burlington Street

OSBORNE PARK
North City Pty. Ltd.,
Cnr. Scarborough Beach Rd. & Harbourne St.

PERTH
Attwood's Holden,
22 Stirling Street

PERTH
City Motors Pty. Ltd.,
505 Newcastle Street

PERTH
Sydney Atkinson Motors Ltd.,
20 Terrace Drive

VICTORIA PARK
Young's W.A. (1975) Pty. Ltd.,
529 Albany Highway

WESTERN AUSTRALIA — COUNTRY DEALERS & SERVICE DEALERS

ALBANY
BEVERLEY
BODDINGTON
BOYUP BROOK
BROOKTON
BROOME
BRUCE ROCK
BUNBURY
BUSSELTON
CARNAMAH
CARNARVON
COLLIE
CORRIGIN
CRANBROOK
DALWALLINU
DERBY
ESPERANCE
GERALDTON
GNOWANGERUP
GOOMALLING
HARVEY
KALGOORLIE
KAMBALDA
KARRATHA
KATANNING
KELLERBERRIN
KULIN
KUNUNURRA
MANJIMUP
MERREDIN
MOORA
MORAWA
MT. BARKER
MULLEWA
NAREMBEEN
NARROGIN
NORTHAM
PINGELLY
PORT HEDLAND
QUAIRADING
WAGIN
WONGAN HILLS
WYALKATCHEM
WYNDHAM

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PREVENTING THE THEFT OF YOUR VEHICLE OR ITS CONTENTS

Your vehicle is a valuable piece of property which should be carefully guarded. The Police Departments in the respective States are endeavouring to protect your property.

Your help is needed, and your attention to the following suggestions is solicited:

1. **Make sure your ignition key is removed when leaving your vehicle unattended, even in your own garage.**

2. **Close all windows and lock all doors when your vehicle is not in use.**

3. **Do not leave valuables in your vehicle where they will be easily seen and may attract unwarranted attention.**

4. **Never leave valuables or personal belongings in your vehicle overnight.**

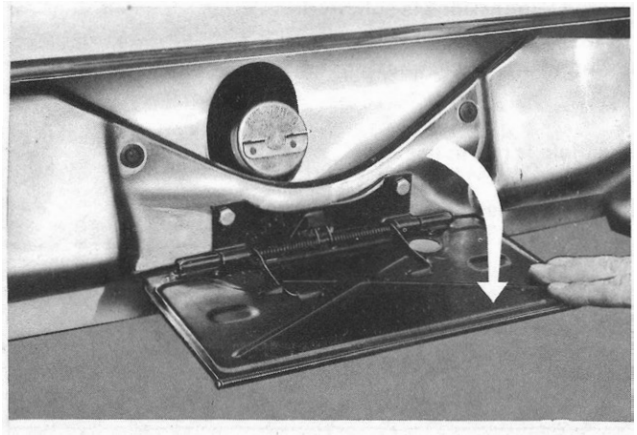
SECTION — 10 SERVICE STATION INFORMATION

FUEL FILLER CAP

NOTE: If this cap requires a replacement, only a cap with the same features should be used. Failure to use the correct cap can result in a serious malfunction of the fuel system. Correct replacement caps may be obtained from your GMH Dealer.

LOCATION

The filler cap is located behind the hinged rear number plate. Access is gained by swinging down the number plate as shown in the illustration.



FUEL REQUIREMENT

The vehicle is designed to operate on a good quality clean fuel.

The major Australian Oil Companies produce their petrol according to the following ratings.

Regular (Std.) Grade = 89 Petrol Research Octane Rating
Premium (Super) Grade = 98 Petrol Research Octane Rating
(Refer to page 74 for the correct octane rating for your vehicle's engine.)

PETROL FUMES

CAUTION: Petrol is extremely inflammable and highly explosive under certain conditions. Always stop the engine and do not smoke or allow open flames or sparks near the vehicle when refuelling. If petrol fumes are noticed while driving, the cause should be determined and corrected without delay.

FILLING THE FUEL TANK

Overfilling of the fuel tank can adversely affect the evaporative Emission Control System.

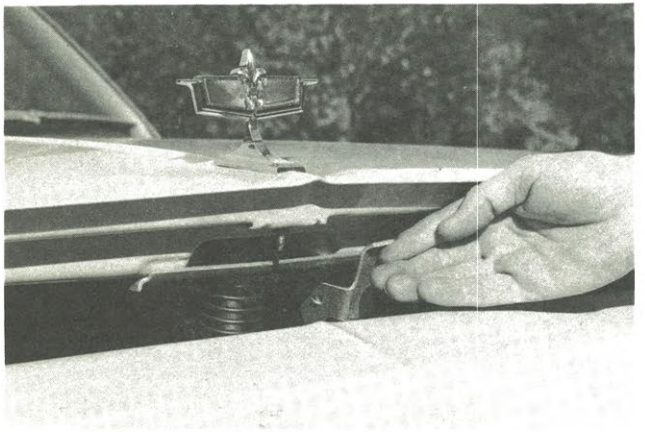
To avoid this, the following recommendations are made,

1. Fuel tanks should always be filled at the intermediate or fast fill rate. After initial shut-off (or vent blow back) no further fuel should be added. This retains the tank's ability to accommodate fuel expansion.
2. It is permissible to "trickle fill" fuel tanks where vehicles are to be driven for a distance of at least 50 km shortly after the tank is filled.

ENGINE HOOD LOCK AND CATCH

The hood lock is controlled from a knob under the driver's side end of the instrument panel. Pull the knob out to release the lock then push the knob back after the hood has disengaged. The counter-balanced hood can then be opened at the front, by lifting the catch lever located to the right of the centre, when facing the vehicle, under the open end of the hood.

To close, simply lower the hood to a near closed position, then firmly push downwards to fully engage the catch and lock.



ENGINE OIL DIPSTICK

Check the oil level as the last operation when stopped for fuel. Maintain oil level between ADD and FULL marks on the dipstick. (Refer to Section 5.)

RADIATOR COOLANT LEVEL

Maintain at 2-3 cm below the bottom of the filler neck. (Refer to Page 60 for further notes.) This should be done on a weekly basis.

BATTERY

Check electrolyte fluid level weekly. If the fluid level is low, add distilled water to bring level to approximately 1 cm above the plates. (Refer to Page 62 for additional information.)

WINDSHIELD WASHER

Check reservoir fluid level weekly. Use a washer fluid additive such as Optikleen. (Refer to Pages 33 and 63 for further notes.)

TYRE PRESSURES

Check pressures weekly and adjust as needed. Refer to Tyre Placard located on the inside of the instrument panel compartment.